

DRAFT:

CHILDREN'S HOSPITAL MEDICAL CENTER ENVIRONMENTAL IMPACT REPORT

**ER-87-75
R87-562**

Prepared for:
City of Oakland
City Planning Department

OCTOBER 12, 1989

State Clearinghouse #88022320

WRITTEN COMMENTS SHOULD BE SENT TO
OAKLAND CITY PLANNING DEPARTMENT
ONE CITY HALL PLAZA
OAKLAND, CALIFORNIA 94612

File No. ER 87-75

Ref. No. R87-562

City of Oakland
Oakland, California

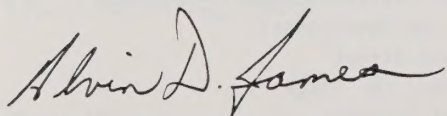
DRAFT ENVIRONMENTAL IMPACT REPORT FOR:
Children's Hospital Medical Center Expansion
(Project Name)
California Environmental Quality Act (CEQA)

RELEASE OF REPORT FOR PUBLIC REVIEW

The City of Oakland is hereby releasing this draft Environmental Impact Report (EIR), finding it to be accurate and complete and ready for public review. Members of the public are invited to respond to the EIR. Comments should focus on the sufficiency of the EIR in discussing possible impacts on the environment, ways in which adverse effects might be minimized, and alternatives to the project in light of the EIR's purpose to provide useful and accurate information about such factors. Please address all comments to the Oakland City Planning Commission, 6th Floor, City Hall, One City Hall Plaza, Oakland, California, 94612. Comments should be received no later than November 27, 1989.

- ☒ The City Planning Commission will conduct a public hearing on the draft EIR on to be scheduled at to be scheduled in Room 115, City Hall.
- ☐ After all comments are received, a final EIR will be prepared and considered for acceptance by the City Planning Commission on _____ at _____ in Room 115, City Hall.
- ☐ The draft EIR is attached.
- ☐ The draft EIR is available at the City Planning Department.

If you have any questions, please telephone the City Planning Department at 273- 3911 . Ask for Willie Yee, Jr., Associate Planner.



ALVIN D. JAMES
Director of City Planning

DATE: October 12, 1989

File No. ER87-75
 Ref. No. R87-562

City of Oakland
 Oakland, California

DRAFT ENVIRONMENTAL IMPACT REPORT FOR:
Children's Hospital Medical Center Expansion
 (Project name)
 California Environmental Quality Act (CEQA)

SUMMARY

A. GENERAL INFORMATION

Project Title Children's Hospital Medical Center Expansion
 Location Martin Luther King, Jr. Way, 52nd and 53rd Streets, Highway 24.
 Project Sponsor Children's Hospital Medical Center
 Address 747 52nd Street

B. PROJECT DESCRIPTION: General Plan Amendment and rezoning, and vacation of the 52nd Street right-of-way between Martin Luther King, Jr. Way and Dover Street. Removal of 23 residential structures, and construction of 800-space parking garage, 80,000 sq.ft. Ambulatory Services Center, and 22,000 sq.ft. addition to the Family Center.

C. SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF THE PROJECT: The existing 23 residential structures would be removed. Closure of the 52nd St. right-of-way would divert vehicles to 55th St. and to 45th St., representing an increase over existing traffic volumes of 84% on 55th St. and 74% on 45th St. The peak-hour Levels of Service would be reduced at one local intersection (PM peak) and at four local intersections (AM peak). Closure of 52nd St. would result in an increase of one to two minutes in emergency response times of the Oakland Police and Fire Departments to points east and west of the Hospital.

D. POSSIBLE MITIGATION MEASURES TO MINIMIZE ANY ADVERSE EFFECTS OF THE PROJECT:

Land Use, Comprehensive Plan and Zoning: see pages 64-66	Geology, Soils and Seismicity: see pages 152-153
Urban Design and Visual Quality: see pages 83-84	Hydrology: see page 157
Transportation, Circulation and Parking: see pages 124-130	Public Services and Utilities: see pages 159, 161; 162-163
Air Quality: see pages 140-141	Energy: see pages 170-171
Noise: see page 148	

E. AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED:

See Chapter XI. EIR Authors and Consultants; Persons and Organizations Consulted (page 204).

F. PUBLIC AGENCIES HAVING JURISDICTION BY LAW OVER THE PROJECT:

City of Oakland	Office of Statewide Health Planning
City Planning Department	and Development
One City Hall Plaza	1600 Ninth Street
Oakland, CA 94612	Sacramento, CA 95814

G. PRELIMINARY DRAFT EIR PREPARED BY: Environmental Science Associates, Inc.
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DATE COMPLETED: San Francisco, CA 94107

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**CHILDREN'S HOSPITAL MEDICAL CENTER EXPANSION
Draft Environmental Impact Report**

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I. INTRODUCTION

This Draft Environmental Impact Report (Draft EIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) and its applicable implementing guidelines.

The City of Oakland prepared an Initial Study on February 9, 1988 on the proposed Children's Hospital Medical Center expansion project (See Appendix A). The Initial Study found that the proposed project would not result in potential significant effects with respect to the following environmental issues:

Geophysical

- Major changes in topography or ground surface relief; construction within 0.25 miles of an earthquake fault; substantial depletion of nonrenewable natural resource.

Air and Water

- Substantial degradation of water quality.

Biotic

- Reduce quantity of fish and wildlife, interfere with natural movement patterns, degrade existing habitat or result in extensive vegetation removal; reduce the numbers of rare or endangered plants or animals.

Land Use and Socio-Economics

- Risk of explosion or release of hazardous substances; destroy or alter structure, object, natural feature, or site of historical, architectural, archaeological, or aesthetic significance; involve an increase of 100 feet or more above an existing adjacent structure.

As permitted by CEQA, these environmental effects will not be addressed further in the Draft EIR on the proposed project.

Concerning the above topics, the Initial Study did identify the following potentially significant environmental effects resulting from implementation of the proposed project:

Geophysical

- Construction on loose fill or other unstable land potentially subject to slides or liquefaction during an earthquake.

Air and Water

- Substantial air emissions or deterioration of ambient air quality; changes in drainage patterns or increased rates or quantities of surface water runoff; interception of an aquifer.

Land Use and Socio-Economics

- Conflict with approved plans for the area or the Oakland Comprehensive Plan; require relocation of residents; cause a substantial alteration in neighborhood land use, density or character; create substantial increase in vehicular movement or burden existing streets or parking facilities; elicit substantial public controversy or opposition; have a substantial impact on existing circulation patterns; result in a substantial increase of the ambient noise levels for adjoining areas; burden public services or facilities including fire, police, and solid waste; burden existing utilities including electricity, gas, water and sewer; use substantial quantities of energy.

This Draft EIR evaluates these potentially significant environmental effects of the proposed project, and also evaluates various other potential effects that could result from implementation of the project.

II. SUMMARY

PROJECT DESCRIPTION

The project site consists of one and one-half city blocks (about 4.06 acres) in the City of Oakland, adjacent to the existing Children's Hospital Medical Center and the State Route 24 freeway. The site is bounded by Martin Luther King Jr. Way on the west; 53rd Street on the north; 52nd Street on the south; and Highway 24 on the east. The portion of the project site to the west of Dover Street (one city block) currently contains 15 single family residential structures, nine of which are used for Hospital functions and five of which are in private residential use, and adjoining off-street surface parking lots containing a total of 217 spaces. The portion of the project site to the east of Dover Street (one-half city block) contains eight residential structures, four of which are owned by the Hospital and four of which are in private ownership and residential use, and the Hospital's Family Center.

The proposed project would be a General Plan Amendment and rezoning of the site, and vacation of the 52nd Street right-of-way, for development of a new Ambulatory Services Center, Parking Garage and expansion of the Family Center, adjacent to the existing Children's Hospital. The project sponsor, Children's Hospital Medical Center, proposes to construct two new structures on the portion of the site west of Dover Street. The proposed Ambulatory Services Center would contain about 80,000 sq. ft. of floor area on five levels. It would contain outpatient medical services of the Hospital, including those activities now occurring in structures elsewhere on the project site. The proposed parking garage would contain about 260,000 sq. ft. (800 parking spaces) on four levels, and would replace the 217 surface parking spaces now on the site. New construction proposed for the portion of the project site east of Dover Street would consist of an addition to the Family Center, containing about 22,000 sq. ft. of floor area on three levels. A 16-space surface parking lot would also be developed in conjunction with the expanded Family Center.

The proposed project would require vacating the 52nd Street right-of-way, between Dover Street and Martin Luther King Jr. Way, and would require vacating the Dover Street right-of-way between 52nd and 53rd Streets, as public streets. A 20,000 sq.-ft. public open space atrium would be developed in the former 52nd Street right-of-way, providing pedestrian access between the new Ambulatory Services Center and the existing Hospital campus. This atrium would

comprise the largest portion of the total 115,050 sq. ft. of public open space proposed for development on the project site. The former Dover Street right-of-way would be re-configured as a private roadway providing access between 53rd Street and the proposed parking garage, expanded Family Center, and existing Hospital campus.

The objectives of the Hospital in proposing this project are to improve patient services and improve traffic circulation around the Hospital campus. The proposed Ambulatory Services Center would improve the efficiencies of both the Inpatient Acute Care and Outpatient Clinic services by physically separating the locations of the two operations. The parking garage would redirect vehicular traffic away from the existing Hospital campus, improve circulation around the Hospital, and reduce Hospital-related on-street parking demand in the adjacent residential neighborhoods. The Family Center would be expanded in response to the demonstrated need for short-term housing in the Hospital vicinity for families of inpatient children.

UNAVOIDABLE SIGNIFICANT ADVERSE EFFECTS

Development of the project would result in significant adverse effects which could not be mitigated to less than significant levels. These effects would include removal of 23 residential structures and would be the northward expansion of Hospital-related uses into an historically residential neighborhood. Closure of 52nd Street would divert daily vehicle traffic to alternate routes, primarily 55th and 45th Streets. Project operation would reduce the operating Level of Service at certain intersections during the AM and PM Peak hours, primarily as a result of the 52nd Street closure, and would increase daily traffic volumes on certain streets in the vicinity. Emergency response times of the Oakland Police Department and Oakland Fire Department would be increased by one to two minutes to affected neighborhoods as a result of closure of the 52nd Street right-of-way to motor vehicle traffic. Alteration in traffic circulation due to closure of 52nd Street and project-generated traffic would result in violation of the state 8-hour carbon monoxide (CO) standard at the intersection of 55th Street and Shattuck Avenue, in the year 2000 without implementation of certain mitigation measures; with mitigation, violation of the CO standard would occur in 2000 with cumulative traffic increases. Project operation would incrementally add to cumulative increases in wastewater generation in the vicinity, which would require upgrading of the capacities of existing collection mains.

SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

Implementation of the proposed project represents a long-term commitment of the project site to urban uses (Hospital activities). Short-term environmental effects of the project include construction-generated localized increases in ambient noise and vehicular emissions, airborne dust and sedimentation of drainage systems, and consumption of energy resources.

Long-term environmental effects of the proposed project due to closure of 52nd Street include alteration of local traffic circulation in the vicinity; effects on emergency response times of the Oakland Police Department and the Oakland Fire Department; addition of daily and p.m. peak-hour traffic to some local streets and intersections, and reduction of daily and peak-hour traffic at others; long-term traffic-generated increases in ambient noise levels along some adjacent street segments; and long-term violation of the state eight-hour average CO standard at the 55th Street/Shattuck Avenue intersection in 2000, with cumulative traffic increases. The project would also result in increased visibility of the site in long-range and short-range views, and alteration in the visual characteristics of 53rd Street adjacent to the site; and minimal increases in demand for utilities, services, and resources.

IRREVERSIBLE ENVIRONMENTAL CHANGES

Construction of the project would require an irreversible expenditure of fossil fuels, and an irreversible commitment of building materials. Development of the project would effectively represent an irreversible commitment of the site to the proposed uses for the lifetime of the project. Replacement of residential structures on the site with Hospital uses would result in a reduction in residential land use for the project's lifetime. Traffic generated by project operation would irreversibly add traffic to certain streets and intersections, and would irreversibly increase ambient noise levels and localized air emissions at some local street segments and intersections. Closure of 52nd Street would irreversibly alter local traffic circulation and would thereby result in violation of the state eight-hour average CO standard in 2000 at the intersection of 55th and Shattuck Avenue, without implementation of certain mitigation measures; with mitigation violation of the CO standard would occur in 2000 with cumulative traffic increases. Closure of the 52nd Street right-of-way would irreversibly affect emergency response times of the Oakland Police Department and the Oakland Fire Department, probably for the lifetime of the project. Project structures would irreversibly increase the visibility of the site in long-range and short-range views, and would irreversibly alter the visual characteristics of 53rd Street adjacent

to the site. Site development would irreversibly increase the amount and rate of stormwater runoff. Operation of the project would result in irreversible consumption of utility and energy resources.

CUMULATIVE EFFECTS

Development of the project would increase the intensity of urban uses in the site vicinity. Removal of residential structures on site would incrementally decrease the area of land historically developed for residential land use and could incrementally decrease the supply of housing units in Oakland. The project structures would add cumulatively to the increased visibility of the site vicinity in long-range and short-range views. Operation of the project would contribute daily and p.m. peak-hour vehicle trips to some local streets and intersections, thereby increasing related vehicle emissions and ambient noise levels on some local roadway segments. The closure of 52nd Street and resulting redistribution of traffic would result in a significant impact on CO levels at the intersection of 55th Street and Shattuck Avenue, without implementation of certain mitigation measures; with mitigation, violation of the CO standard would occur in 2000 with cumulative traffic increases. Development of the project would increase the amount of impervious surfaces on-site, adding incrementally to the amount of stormwater runoff into the storm drainage system. Operation of the project would add cumulatively to demand for police protection and fire suppression services, and water and energy resources, and to increases in amounts of wastewater and solid waste generated for treatment and disposal. Cumulative impact analysis presented below in Sections IV and VIII includes consideration of other known and reasonably foreseeable development projects in the vicinity of Children's Hospital.

GROWTH-INDUCING IMPACTS

The proposed project could have growth-inducing effects by demonstrating a demand in the area for medical uses, thereby encouraging similar development on lots currently vacant, or on lots currently occupied by relatively low-intensity residential and commercial uses. Rezoning of the site from Residential Use zone designations to a Medical Use Zone designation could set a precedent for rezoning of other sites in the area from existing low-intensity residential or commercial use zones, to higher-density zone designation for a similar or a different type of use. Increases in employment resulting from the project could increase the demand for medical supply and business services.

ALTERNATIVES

ALTERNATIVE A: NO PROJECT

The No Project Alternative would entail no changes to the project site. A Comprehensive Plan Amendment, and a Zone change from the current R-40 and R-50 designations to an S-1 designation, would not be required. Vacating of 52nd Street as a public street would not occur, and no change to the traffic circulation pattern in the vicinity would result. The environmental impacts resulting from development and operation of the project would not occur. This alternative could result in development of the site in the future with a Hospital-related or another type of development. This alternative could also result in the relocation of all or part of the Hospital facilities to another site, probably outside of the City of Oakland.

ALTERNATIVE B: ALTERNATIVE SITES

Under this Alternative, Children's Hospital would develop the proposal Ambulatory Services Center at another site in Oakland. The parking garage and Family Center expansion as proposed would not be developed on the site. Environmental effects associated with project operation would occur with this alternative and could be similar to those of the project, at the alternative site and vicinity, to an extent greater than, equal to, or less than those of the project depending on the location of the alternative site. Environmental effects associated with closure of 52nd Street and resulting traffic circulation changes would not occur with this alternative.

ALTERNATIVE C: REDUCED-SCALE AMBULATORY SERVICES CENTER

An Ambulatory Services Center containing approximately 40,000 sq. ft. (one-half the size of the proposed center), and a parking garage and expanded Family Center as under the proposed project would be developed. Peak parking demand generated by the alternative Ambulatory Services Center could be virtually accommodated by the proposed garage and existing off-street lots. Environmental effects of the alternative Ambulatory Services Center would generally be about 50% of those of the proposed project. Closure of the 52nd Street right-of-way as a public street, and resulting changes in the traffic circulation pattern, would occur with this alternative. Resulting effects on CO levels at the 55th Street/Shattuck Avenue intersection, without mitigation, and with mitigation with cumulative traffic increases in 2000, would also occur as with the project. Effects on emergency response times of the Police and Fire Departments would also be the same as to those of the project. Effects on noise would be less, in rough

proportion to the reduction in traffic generation. Effects on neighborhood residential use would be the same as with the project, with removal of all housing units on-site required under this alternative. Effects on geology, seismic hazard, and hydrology could be less under this alternative. Effects on long-range and short-range views would be less, with an alternative building of lower height.

ALTERNATIVE D: REDUCED-SCALE GARAGE AND REDUCED-SCALE AMBULATORY SERVICES CENTER

A parking garage containing about 400 spaces, an Ambulatory Services Center containing approximately 40,000 sq. ft. (one-half the size of the proposed Center), and an expanded Family Center as with the project, would be developed. Environmental effects of this alternative would generally be of less magnitude compared to the project. The number of vehicle trips generated by operation of the alternative would be about 50% of vehicle trips generated by the proposed project due to a smaller Ambulatory Services Center, although traffic circulation in the vicinity could differ because only one-half of the off-street parking spaces proposed with the project would be provided under this alternative. Alteration of traffic circulation patterns resulting from closure of 52nd Street as a public street would be similar, and effects on emergency response times of the Police and Fire Departments would occur as with the project. Effects on CO levels at the 55th Street/Shattuck Avenue intersection, with cumulative traffic increases in 2000, would occur under this alternative. Effects on noise would be less, in proportion to the reduction in traffic generation. Removal of all residential buildings on site would be required, and the effects of this alternative on neighborhood residential use would be the same as the project. Impacts on geology, seismic hazard, and hydrology would also be essentially the same. Operational demand on public utilities and on energy supplies would be about 50% of the operational demand of the proposed project. Effects on the visual character of 53rd Street adjacent to the site would be less with an alternative Ambulatory Services Center and parking garage of lower height.

ALTERNATIVE E: DIVERTED 52ND STREET

The 52nd Street right-of-way would be diverted through the northeastern corner of the project site, to connect directly to 53rd Street. The new street would connect with 52nd Street near Dover Street, follow the general alignment of Dover Street to 53rd Street, and then travel parallel to and south of 53rd Street to Martin Luther King, Jr. Way. The existing 53rd Street would be maintained as a local residential street connecting to Dover Street. The Ambulatory Services Center, parking garage and Family Center expansion would contain approximately the

same floor areas as with the proposed project. However, the site layout would be altered in order to accommodate the 52nd St. diversion. The traffic access circle adjacent to Martin Luther King, Jr. Way, proposed with the project, would be eliminated under this alternative. This alternative would reduce the traffic impacts of street closure, by maintaining a through connection between Martin Luther King Jr. Way and 52nd Street. Nearly all of the existing through traffic on 52nd Street adjacent to the hospital would use the new connection rather than divert to 45th and 55th Street. With through traffic diverted to the north side of the hospital, the portion of 52nd Street adjacent to the hospital could be closed as in the proposed project. Conflicts between pedestrians and vehicles at Children's Hospital would be significantly reduced.

Environmental effects on traffic circulation in the site vicinity would, overall, be less than with the proposed project. Effects on local vehicular circulation would be generally less under this alternative, because the capacity for east-west vehicular travel past the site would not change over existing conditions, compared to the project. Traffic impacts and associated noise would increase substantially for residents along the north side of 53rd Street. Accessibility for these residents would also be impacted, because there would not be a direct connection between 53rd Street and Martin Luther King, Jr. Way. The effect of the local traffic circulation changes with the proposed project and cumulative traffic increases in 2000, on CO levels at the 55th Street/Shattuck Avenue intersection, would not occur under this alternative. Removal of all housing units on the project site would be required, and the effect on neighborhood residential use would be the same. Seismic hazards and effects on geology and hydrology would be about the same. Demand on public services and utilities, and energy, would be essentially the same under this alternative as with the proposed project; the effects on emergency response by the Oakland Police and Fire Departments would be less under this alternative than with the project.

ALTERNATIVE F: NO 52ND STREET PEDESTRIAN ATRIUM

The 52nd Street right-of-way would remain open to vehicular traffic. The Ambulatory Services Center, parking garage and Family Center expansion would be developed as with the proposed project. Environmental effects on traffic circulation in the site vicinity would, overall, be less than with the proposed project. Effects on emergency response times of the Oakland Police and Fire Departments would also be less. The number of vehicle trips generated by operation of the development would be as with the project, thus, related effects on operational noise and air quality would be comparable to those of the project, although the road segments affected would

differ. The effect of the local traffic circulation changes with the proposed project and cumulative traffic increases in 2000, on CO levels at the 55th Street/Shattuck Avenue intersection, would not occur under this alternative. Effects on neighborhood residential use would be the same as with the proposed, with removal of all on-site residential structures required under this alternative. Effects on geology, seismic hazard, hydrology, and demand for public utilities and energy would be essentially the same under this alternative as with the project.

Variants of No 52nd Street Pedestrian Atrium Alternative

A single pedestrian overpass bridge across 52nd Street would be constructed between the new Ambulatory Services Center and the existing Hospital Nursing Tower, thereby physically separating pedestrians traveling between the alternative project and the existing Hospital from east-west motor vehicle traffic on 52nd Street. This alternative variant would not improve effects on pedestrian safety as much as the proposed project, because there appears to be no strategic design possible which would make the overpass more convenient than crossing 52nd Street at grade.

A pedestrian tunnel would be developed, connecting the Ambulatory Services Center and the Nursing Tower, across 52nd Street. This alternative variant would physically separate pedestrians from east-west motor vehicle traffic on 52nd Street. The pedestrian underpass, or tunnel, would provide pedestrian access between Hospital campus areas at about one level below grade. This alternative variant would not improve pedestrian safety as much as the proposed project, because there appears to be no strategic design possible to require all pedestrians to use the tunnel rather than crossing 52nd Street at grade.

The 52nd Street right-of-way would be depressed to below grade between Martin Luther King Jr. Way and Dover Street, and a pedestrian bridge across 52nd Street would be constructed for access between the Ambulatory Services Center and the north (Nursing) tower on the existing Hospital campus. This alternative variant would result in the physical separation of pedestrians from east-west motor vehicle traffic along 52nd Street, and would have less potentially significant adverse effects on pedestrian safety than would either of the Alternative Variants described above. Compared to the proposed project, effects on pedestrian safety would be about the same.

A signalized crosswalk could be installed across 52nd Street between Martin Luther King, Jr. Way and Dover Street. The signal would be activated by pedestrians using a push

button. The signalized crosswalk would not eliminate problems created by pedestrians crossing vehicle flows on 52nd Street, but safety would be improved for those pedestrians compared to existing conditions. However, pedestrian safety would not be improved as much as with the proposed project, because pedestrians would not be physically separated from motor vehicle traffic on 52nd Street under this alternative.

A raised median island would be developed in the center of 52nd Street. An additional 12 feet in right-of-way for 52nd Street would be taken from the project site to provide for left-turn pockets for the parking garage and passenger drop-off access. The proposed Ambulatory Services Center building would have to be reconfigured on the smaller site. The median barrier would feature fencing and/or dense landscaping to require pedestrians to cross 52nd Street at signalized crosswalks at Martin Luther King, Jr. Way and Dover Street. A signalized mid-block crosswalk could also be provided. The median barrier could also be combined with a pedestrian overpass and/or underpass across 52nd Street.

An alternative variant would designate traffic to one-way along 52nd Street, between Shattuck Avenue and Martin Luther King, Jr. Way. Vehicle traffic on 52nd Street between the project site and existing Hospital campus would be diverted to alternate routes for one direction of travel, while traffic for another travel direction would remain. Pedestrian safety would not be improved as much as with the proposed projects' removal of vehicle traffic from 52nd Street.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
A. <u>Land Use, Comprehensive Plan and Zoning</u> Expansion of Hospital-related uses on the project site would be a northward expansion of medical facilities onto a city block (west of Dover Street) that was formerly occupied entirely by residential uses and would replace existing residential uses with medical-related uses (east of Dover Street). Development of the project would require the removal of 23 residential structures on the site, nine of which are currently in residential use and are not under Hospital ownership. Development of each building proposed with the project would occur once the Hospital has acquired all of the required properties for the building site through negotiated purchase. Development of the project could induce owners of parcels with existing low-density residential uses in the site vicinity to attempt to redevelop the parcels with higher-density non-residential uses, or with higher-density residential uses. The project could also encourage private physicians to purchase residential structures in the vicinity for conversion to medical office uses. The proposed closure of 52nd Street as a public right-of-way would result in an alteration in local traffic circulation. Traffic increases attributable to the proposed project would result in an increase in the ambient noise levels along segments of 55th Street between Martin Luther King, Jr. Way and Shattuck Avenue, and a segment of 45th Street between Martin Luther King, Jr. Way and Shattuck Avenue. Ambient noise levels at these locations and adjacent to the project site currently exceed the maximum "normally acceptable" noise level for residential	<u>Proposed with the Project:</u> None identified. <u>This may be considered an unavoidable significant adverse effect which cannot be mitigated to a level of insignificance.</u> None identified. The City would consider applications for higher intensity uses in the vicinity on a case-by-case basis. <u>Proposed with the Project:</u> A landscaped buffer of trees and shrubs, at least ten feet in width, would be provided at site frontages on Martin Luther King Jr. Way and 53rd Street, to minimize potential noise and visual impacts on these streets and on existing adjacent residential and commercial development.	Implementation of the measure would have a minimal effect on the impact identified. However, the project impact is not significant in that normally acceptable ambient noise levels for hospital and residential uses are currently exceeded adjacent to the Hospital and residences in the vicinity, and the proposed project would not result in audible increases in ambient noise levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
A. <u>Land Use, Comprehensive Plan and Zoning</u> (Continued) and hospital uses. Therefore, development of the project at the site could conflict with the policy of the Land Use Element of the Comprehensive Plan, which discourages new land uses and density increases in locations where noise levels in the future exceed what is reasonably acceptable for such uses. Development of the project would not respond to policies of the Land Use, Housing, and Policy Plan Elements of the Comprehensive Plan, regarding conservation of existing residential units, if on-site units are demolished.	<u>Identified in this Report:</u> To respond to the Comprehensive Plan policies of the Land Use, Housing and Policy Elements regarding relocation rather than demolition of existing sound residential units, the 23 existing residential units on the project site could be relocated to vacant lots in residential areas in the site vicinity if the units are determined to be in sound physical condition.	Implementation of this measure would reduce this potentially significant impact. Without implementation of this measure, demolition of the housing units would be a significant adverse effect of the project.
The proposed vacating of the 52nd Street right-of-way would remove a segment of a street designated under the Comprehensive Plan as an "Arterial Street."	None identified (but see Alternatives E and F). The closure of 52nd Street would not be a significant adverse impact in regard to the Oakland Comprehensive Plan (but see Transportation, Circulation, and Parking; and Air Quality, below).	
Development of the pedestrian atrium at the 52nd Street right-of-way would respond to Pedestrian and Bikeways policies of the Oakland Policy Plan.	None required.	
The required Zone Change of the site would result in a boundary between a Civic Use Zone and a Residential Zone along the middle of 53rd Street, and would therefore conflict with the policy of the Land Use Element of the	None identified. The location of the zoning district boundary would not by itself be a significant adverse impact.	

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
A. <u>Land Use, Comprehensive Plan and Zoning</u> (Continued) Comprehensive Plan that boundaries of Zones of potentially inharmonious land uses should run along rear property lines as opposed to along public right-of-ways. The proposed project would be developed at a greater intensity than adjacent residential uses. The project would therefore conflict with the policy of the Land Use Element of the General Plan that the intensity of development of civic uses in residential areas should generally not exceed the intensity and building height of adjacent residential uses.	None identified. The Floor Area Ratio (0.58:1) of the project would be less than that permitted (FAR 4.0:1) under S-1 Zone designation. The conflict between the proposed project development and the applicable Land Use Element policy would not be a significant adverse impact.	
14 Development of the project would require a zone change of the project site from the current R-50 (Medium Density Residential) and R-40 (Garden Apartment Residential), to S-1 (Medical Center). The zone change could set a precedent for similar rezoning of sites in the vicinity, to zones under which non-residential development could occur.	The Planning Commission and City Council, in making decisions regarding approval or disapproval of this project, could provide future direction for the types and intensities of future development in the site vicinity.	
B. <u>Urban Design and Visual Quality</u> The proposed Ambulatory Services Center and parking garage would be visible from viewpoints within about one-half mile of the site, along the elevated Highway 24 and BART structures. The project structures would be about the same or lesser height compared to existing buildings on the Hospital campus.	None required.	

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
B. <u>Urban Design and Visual Quality</u> (Continued) Development of the project would alter views toward the site from streets within about two blocks. Views of remaining one-story residential structures and parking lots would be replaced by views of relatively massive structures and open space areas with landscaping.	<u>Proposed with the Project:</u> A landscaped buffer of trees would be provided at the perimeter of the project site, along site frontages at Martin Luther King, Jr. Way, 53rd Street, and Dover Street, to minimize potential impacts on adjacent streets and development resulting from increased visibility, noise, and nighttime lighting with project operation. Landscaping would also be provided at the perimeter of access drives. A landscaped atrium providing pedestrian access would be provided along most of the former 52nd Street right-of-way between the proposed Ambulatory Services Center and the Hospital campus, in order to facilitate pedestrian access through the Hospital campus and to provide public open space for neighborhood residents, and Hospital employees and visitors. <u>Identified in this Report:</u> Use light-colored, as opposed to white or darker-colored stucco for facing buildings. Light-colored material would reduce the appearance of building mass compared to darker colors and would cause less glare from reflected light than would white material.	Implementation of the measures proposed with the project would reduce the level of impact to less than significant levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
B. <u>Urban Design and Visual Quality</u> (Continued) The four-level parking garage would be about double the height of the existing residential structures directly across 53rd Street from the site. The north wall of the parking garage would be about 450 feet in length along the 53rd Street site frontage, compared to a length of about 25-30 feet of each residential structure facade along 53rd Street, separated by a 15-to-20-foot-wide yard area. The parking garage would also add new shadow to the street and sidewalks of 53rd Street during virtually all daylight hours of the year. The shadow cast by the garage could reach across 53rd Street to the front yards of existing residences between sunrise and about 10:00 a.m., and between about 3:00 p.m. and sunset, in December. Operation of the project could result in a reduction in the amount of nighttime lighting in the area. The nighttime lighting of the area surrounding the site would probably be less with operation of the project than with existing nighttime lighting of on-site parking lots.	<u>Identified in this Report:</u> The exterior wall of the parking garage along 53rd Street could be set back by at least eight feet above the second level, in order to reduce the structure's appearance of bulk and to enhance the visual relationship of the height of the garage and the height of existing residences across 53rd Street. The exterior setback would also reduce the extent of new shadow cast by the garage onto 53rd Street, and would prevent new shadow from reaching the yards of residences along 53rd Street. The exterior wall of the garage at 53rd Street could also be indented at regular intervals, corresponding to the fronts of existing residences across 53rd Street, to reduce the structures' appearance of length along this block. <u>Identified in this Report:</u> Shield exterior lighting of all project buildings to contain light on-site. Avoid spotlighting building walls and landscaped areas. Shield and direct downward exterior lighting along pedestrian walkways and in parking areas to reduce light effects off site. Avoid use of wall-mounted or pole-mounted exterior lighting, and lighting placed along rooflines except at building entrances.	Implementation of these measures would reduce the level of impact to less than significant levels. Without mitigation, this would be a significant adverse impact on the visual quality of the residential neighborhood within two blocks north of the site. Implementation of these measures would reduce the level of impact to less than significant levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
C. <u>Transportation, Circulation, and Parking</u>		
Closure of 52nd Street at the project site could divert about 5,200 northbound vehicles daily to 55th Street; also about 1,380 southbound vehicles daily could be diverted to 45th Street. About 310 daily vehicle trips within the immediate vicinity would be diverted to alternate routes.	None identified (but see Alternatives E and F).	This would be a significant unavoidable adverse impact, without mitigation.
Traffic generated by the project, and alteration in the local traffic circulation pattern resulting from closure of 52nd Street, would increase daily traffic volumes on 55th Street between Shattuck Avenue and Martin Luther King Jr. Way by 84% (from 5,500 to 10,100 daily vehicles); on 45th Street between Martin Luther King Jr. Way and Shattuck Avenue by about 74% (from 2,700 to 4,700 daily vehicles); and on Shattuck Avenue between 52nd and 55th Streets by about 34% (from 17,500 to 23,400 daily vehicles).	None identified. The increase in daily traffic volumes on streets generated by operation of the project would not be a significant effect of the proposed project. <u>The effects of traffic diversion resulting from closure of 52nd Street on operating LOS at certain intersections would be an unavoidable significant adverse effect</u> (see discussion on next page).	
The alteration in the local traffic pattern would result in a decrease in daily traffic volumes of 53% on 52nd Street near Dover Street (from 8,700 to 4,100 daily vehicles); and 8% on Martin Luther King Jr. Way between 52nd and 55th Streets (from 42,000 to 38,600 daily vehicles).	None required.	
Project-generated traffic and alteration in local traffic circulation as a result of closure of 52nd Street would change the operating Levels of Service (LOS) during peak hours at several intersections in the area. Specifically, the AM peak-hour LOS would be reduced from "A" to "B" at Shattuck Avenue/55th Street; from "A" to "C" at Martin Luther King Jr. Way/55th Street;	<u>Martin Luther King Jr. Way and 55th Street.</u> Revise the existing signal operation to provide an exclusive left-turn phase for the southbound left turn. <u>Shattuck Avenue and 52nd Street.</u> Widen the southbound approach on Shattuck Avenue from two lanes to three lanes. The widening would require additional right-of-way from	These would be significant unavoidable adverse impacts, even with the implementation of mitigation measures.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
C. <u>Transportation, Circulation, and Parking</u> (Continued)		
from "B" to "C" at Martin Luther King Jr. Way/47th Street, Martin Luther King Jr. Way/52nd Street, and Shattuck Avenue/52nd Street. The PM peak-hour LOS would be reduced from "B" to "E" at Shattuck Avenue/55th Street; from "D" to "F" at Martin Luther King Jr. Way/55th Street and Shattuck Avenue/52nd Street. The PM peak-hour LOS would be improved from "D" to "C" at Martin Luther King Jr. Way/52nd Street; from "E" to "D" at Telegraph Avenue/51st Street; and from "E" to "D" at Highway 24 off-ramp/52nd Street.	the Hospital's Gulf Lot. In the westbound direction at the 52nd Street and Shattuck Avenue intersection, the curb lane could be striped as a right turn lane and on-street parking could be prohibited. To improve operations, the existing merge between westbound 52nd Street and 51st Street could be modified. <u>Shattuck Avenue and 55th Street.</u> Restripe the eastbound approach on 55th Street to provide a right turn lane, and restripe the northbound approach on Shattuck Avenue to provide a left turn lane. Remove parking as necessary.	
With closure of 52nd Street and traffic generated by the Hospital and the project, traffic volumes at the proposed Martin Luther King Jr. Way entrance would be about 4,000 daily and 300 to 400 peak-hour vehicles (46% lower than existing volumes at the intersection).	None required.	
Peak-hour flows at the west entrance to the parking garage, at the access drive connecting to Martin Luther King Jr. Way, would be about 160 vehicles in the AM and about 200 vehicles in the PM. Peak-hour flows at the east entrance to the garage, at Dover Street, would be about 65 vehicles in the AM and about 80 vehicles in the PM.	<u>Identified in this Report:</u> The westbound approach of the hospital entrance at Martin Luther King Jr. Way, opposite 52nd Street, could be widened to provide two westbound lanes and one eastbound lane.	Implementation of this measure would minimize the level of impacts.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
C. <u>Transportation, Circulation, and Parking</u> (Continued)		
Provision of a total of 570 net additional parking spaces with the project would result in a decrease of 320 vehicles parking in on-street spaces in the vicinity.	<u>Identified in this Report:</u> The hospital could continue to use the existing remote parking lots in order to ensure that neighborhood impacts are minimized.	This may be considered a beneficial impact of the project, even without implementation of the mitigation measure.
Future pedestrian activity across 52nd Street with the project would increase from about 220 persons to about 620 persons during peak hours. Closure of 52nd Street to vehicle traffic, as proposed with the project, would prevent potential conflicts between pedestrians and motor vehicles.	None required.	
The bicycle commute route recommended by the East Bay Bicycle Coalition for travel between Berkeley and the Rockridge area would be blocked by closure of 52nd Street.	<u>Identified in this Report:</u> Bicycle commute routes could be revised to ensure that left turns are made at signalized intersections only. Bicycle lanes could be striped in the site vicinity.	Implementation of this measure would reduce the level of impact to less than significant levels.
Emergency response times of the Oakland Fire Department to points north and west of the Hospital would be increased by one to two minutes after closure of 52nd Street.	None identified (but see Alternatives E and F).	<u>This would be a significant unavoidable adverse impact, without mitigation.</u>
D. <u>Air Quality</u>		
Project construction activities would generate fugitive dust emissions, probably resulting in occasional excesses of the state PM ₁₀ standard in the construction site vicinity.	<u>Identified in this Report:</u> Sprinkle all unpaved construction areas with water at least twice per day during excavation and grading. Twice daily sprinkling could reduce particulate emissions by as much as 50%. Undertake more frequent watering under hot, windy conditions. Sprinkle stockpiles of sand, soil and similar materials to further reduce fugitive dust emissions.	Implementation of these measures would reduce the level of impacts to less than significant levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
D. <u>Air Quality</u> (Continued)		
Project-generated vehicle traffic would generate about 450 lb/day of CO, 18 lb/day of HC, 37 lb/day of NO _x , 6 lb/day of SO ₂ , and 65 lb/day of TSP. These emissions would not exceed BAAQMD significance thresholds. Alteration in traffic circulation due to closure of 52nd Street between Martin Luther King Jr. Way and Highway 24, and traffic generated by operation of the project would cause violation of the eight-hour average CO standard at the 55th Street and Shattuck Avenue intersection.	Implement intersection improvement measures discussed in the Transportation section of this report.	Implementation of these measures would reduce the level of project impacts to less than significant levels, although cumulative effects would be unavoidably significant by 2000 even with mitigation of project effects.
E. <u>Noise</u>		
Project construction activities would temporarily increase noise levels in the interior of existing Hospital and residential structures adjacent to the site to about 62 dBA.	<u>Identified in this Report:</u> Schedule construction between 8:00 a.m. and 6:00 p.m., Monday through Saturday. Schedule noisy construction activities in shifts to avoid high noise levels caused by operating several pieces of equipment simultaneously. Require the project contractor to use power construction equipment with state-of-the-art noise shielding and muffling devices. Place barriers around the project site and around stationary equipment such as compressors, which would reduce construction noise by as much as five dBA.	Implementation of these measures would reduce the impacts to less than significant levels.
Alteration in traffic circulation and project-generated traffic increases would result in an increase of less than 3 dBA in the ambient noise levels along the following roadway segments: 45th Street between Martin Luther King, Jr. Way and Shattuck Avenue, 55th Street between Martin Luther King, Jr. Way and Shattuck Avenue, and Shattuck Avenue between 52nd Street and 55th Street. This would be an increase below the level (3 dBA) that would be noticeable.	<u>Proposed with the Project:</u> A landscaped buffer of trees and shrubs, at least ten feet in width, would be provided at site frontages on Martin Luther King Jr. Way and 53rd Street, to minimize potential noise and visual impacts on these streets and on existing adjacent residential and commercial development.	Implementation of the measure would have a minimal effect on the impact identified. However, the project impact is not significant in that normally acceptable ambient noise levels for hospital and residential uses are currently exceeded adjacent to the Hospital and residences in the vicinity, and the proposed project would not result in audible increases in ambient noise levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
F. <u>Geology, Soils, and Seismicity</u>		
Excavation on-site for project construction would be required to remove unsuitable and deleterious soils, estimated to result in the removal of a total of about 3,800 cubic yards. Subsequent import of aggregate and engineered fill to the site would occur.	<u>Measures Identified in this Report:</u> To evaluate soil conditions and provide input into foundation design, a soil investigation for the proposed site could be prepared by a California-licensed soils engineer. To reduce the amount of earth movement, excavation and filling could be balanced to the extent feasible and on-site excavated soils could be re-used on site as feasible. All haul trucks leaving the site could be covered.	Implementation of these measures would reduce the impacts to less than significant levels.
Project construction would remove existing surface cover over the site, exposing soil to weather conditions that could transport eroded soil into local streets, gutters and storm drains.	<u>Measures Identified in this Report:</u> To minimize soil erosion, an erosion control plan could be developed by the project civil engineer. The following guidelines could be incorporated into the plan: Remove surface cover from soil only when construction is set to begin. Uncover soil only at potential construction site, leave cover at areas not proposed for development. Undertake grading during the summer dry season (May to September). Erect berms or hay bale barriers to direct runoff away from cleared areas. Revegetate cleared areas prior to the onset of winter rains. Cover stockpiles of soil.	Implementation of these measures would reduce the impacts to less than significant levels.
The project would be subject to strong groundshaking in the event of a major earthquake. Structural damage would be unlikely if the project were designed and constructed in conformance with the Uniform Building Code. Non-structural results of seismic activity could include falling of interior furnishings and fixtures, exposing project occupants to hazardous conditions. Utility lines could rupture, thereby hindering emergency response.	<u>Measures Identified in this Report:</u> To reduce seismic hazards, design and construct buildings in conformance with the seismic and life safety standards of the Uniform Building Code. Securely fasten shelves, wall hangings and suspended ceilings to the building structure. To increase emergency preparedness, develop an emergency response plan and conduct periodic drills for project staff. Designate a safe outdoor area for evacuation of people from the project if necessary.	Implementation of these measures would reduce the impacts to less than significant levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
G. Hydrology		
Removal of existing uses on the site, and subsequent development of the proposed project, would result in a small increase in impervious surface on the site. The rate of peak runoff flows from the site would therefore increase from 1.4 cfs to 1.5 cfs during the two-year storm. During the 100-year storm, peak runoff would increase from 4.7 cfs to 4.8 cfs.	<u>Measures Identified in this Report:</u> To provide adequate storm drainage for the project, drainage facilities would be designed by a California-licensed civil engineer in conformance with the City of Oakland design standards. Construct drain inlets and subsurface storm sewers at the site and connect them to either the existing 52nd or Dover Street storm drains. Based on the design of project facilities, the project civil engineer should submit to the city for review calculations investigating the adequacy of existing storm drains to accommodate projected peak flows from the developed site.	Implementation of these measures would reduce the impacts to less than significant levels.
Project construction would expose soils on site to erosion. Soil from the site would be transported to surrounding roadways and into storm drain inlets. Turbid runoff would also flow into nearby Temescal Creek, affecting its water quality.	<u>Measure Identified in This Report:</u> To reduce sediment production during construction, an erosion control plan should be prepared by the project soils engineer and implemented.	Implementation of these measures would reduce the impacts to less than significant levels.
Project operation would generate urban pollutants, including oil, grease, metal and rubber from vehicles in the proposed parking garage. Those pollutants would be carried off-site with runoff.	<u>Measure Identified in This Report:</u> To reduce oil and grease concentration in site runoff, especially from the parking garage, install grease traps on drain inlets and manholes at the site. Those traps must be cleaned periodically by hospital staff to be effective.	Implementation of these measures would reduce the impacts to less than significant levels.
Excavation activities for construction of project foundations and trenching for utility connections could require dewatering at the site. Any dewatering required could temporarily lower the groundwater table in the site area.	<u>Measure Identified in this Report:</u> To reduce the amount of dewatering, site preparation and grading would occur during the summer dry season (May to October) if feasible.	Implementation of these measures would reduce the impacts to less than significant levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
H. <u>Public Services and Utilities</u>		
The Oakland Police Department anticipates that the increased patient population in the area resulting from project operation would result in a minimal increase in calls for police services.	<u>Measures Identified in this Report:</u> The project site and building plans could be reviewed and approved by the Oakland Police Department as part of the project approval process, to ensure that adequate site and building access are available for emergency response services. The Oakland Police Department could be given an access code for security gates to the parking garage, and for any building entrance doors that would be locked during normal operating hours, to allow emergency and non-emergency access to the project.	Implementation of these measures would reduce impacts to less than significant levels.
23 The proposed vacating of the 52nd Street right-of-way would result in an increase of one to two minutes on emergency response times of the Police Department to impacted neighborhoods in the vicinity.	None identified (but see Alternatives E and F).	<u>This would be a significant unavoidable adverse impact, without mitigation.</u>
Operation of the project would not be expected to have a significant impact on existing levels of Fire Department equipment and personnel.	<u>Measures Identified in this Report:</u> The project site and building plans could be reviewed and approved by the Oakland Fire Department as part of the project approval process, to ensure adequate fire prevention equipment and access available for emergency fire fighting and to ensure that all applicable requirements of the Uniform Building Code are met. The Oakland Fire Department could be given an access code for security gates to the parking garage, and for any building entrance doors that would be locked during normal operating hours, to allow emergency and non-emergency access to the project.	Implementation of these measures would reduce impacts to less than significant levels.
Existing water supply infrastructure adjacent to the site may be inadequate to meet fire suppression requirements for the project.		

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
H. <u>Public Services and Utilities</u> (Continued)	The project could be required to include provision of one additional fire hydrant on or adjacent to the project site, in order to ensure adequate capabilities for fire suppression in the area.	
Closure of the 52nd Street right-of-way to monitor vehicles would have an effect on emergency response times from Station 8 of the Fire Department to areas west of the project. Emergency response times to impacted neighborhoods would be lengthened by one to two minutes.	None identified (but see Alternatives E and F).	<u>This would be a significant unavoidable adverse impact, without mitigation.</u>
24 Operation of the project would generate an estimated demand for about 10,120 gallons of water supply per day.	<u>Measures Identified in this Report:</u> EBMUD could require installation of a new eight-inch supply main at 52nd Street to serve the project demand and would also require dedication of an emergency repair access right-of-way along the proposed pedestrian area in 52nd Street.	Project-generated demand would not have a significant impact on water supply facilities serving the area.
The project would generate an estimated 9,110 gallons per day of wastewater. As a result of cumulative increases in wastewater generation, existing collection mains at 36th Street, Peralta Street and 34th Street would require upgrading of capacities.	<u>Measures Identified in this Report:</u> A 20-year program for improvements to the collection system has been prepared, although a specific timetable has not been set. Recommendations of the State Department of Water Resources for reducing water consumption, and thereby reducing generation of wastewater, include use of exterior landscaping plant species with low water use; use of water-efficient landscaping irrigation systems; and use of water conserving appliances and plumbing fixtures in building interiors.	This could be a significant cumulative adverse impact, depending upon the timing of capacity upgrades.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
H. <u>Public Services and Utilities</u> (Continued)		
The project would generate an estimated 8,324 lbs. per day of solid waste. Generation of potentially hazardous waste material is not anticipated. Project-generated waste would not have a significant impact on waste disposal facilities serving the area.	None required.	
Pacific Bell anticipates no constraints to providing new service to the project. Cable would be installed underground, in joint trenches with P.G.and E., along the vacated 52nd Street right-of-way. A emergency repair access easement would be required along the right-of-way.	None required.	
I. <u>Energy</u>		
Operation of the proposed Ambulatory Services Center and Family Center expansion would result in annual consumption of about 1.5 million kWh of electricity and about 9.6 million cubic feet of natural gas. Operation of the proposed parking garage would result in annual consumption of about 520,000 kWh of electricity. Total annual project energy consumption would be less than 0.01% of total annual consumption in PG&E's service area.	<u>Measures Identified in this Report:</u> Building energy consumption could be reduced through various energy-efficient design measures, such as: Reduced lighting (including task lighting, daylighting, and automatic lighting controls); Electrical load management; Energy management and control systems; and Alternative energy systems (such as cogeneration and solar energy).	Implementation of these measures would reduce impacts to less than significant levels.
Project-generated vehicle trips would consume an estimated 161,000 gallons per year of fuel energy.	<u>Measure Identified in this Report:</u> Transportation-related energy consumption could be reduced through car-pooling or other Transportation Systems Management (TSM) measures identified in the Transportation Section.	Implementation of these measures would reduce impacts to less than significant levels.

TABLE S: ENVIRONMENTAL IMPACT OF THE PROJECT, MITIGATION STRATEGY, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION (Continued)

ENVIRONMENTAL IMPACT	MITIGATION STRATEGY	LEVEL OF SIGNIFICANCE AFTER MITIGATION
I. <u>Energy</u> (Continued)		
Development of open space in the 52nd Street right-of-way would require placement of the existing aerial electrical line underground along 52nd Street. The existing underground gas line at 52nd Street would remain in place unless excavation were to require its removal, or unless a structure were proposed to be developed at ground level in the 52nd Street right-of-way.	None required.	

III. PROJECT DESCRIPTION

A. PROJECT LOCATION

The project site is a full one and one-half city blocks (about 4.06 acres) in the City of Oakland, about two miles north of the Oakland Central Business District and adjacent to the Children's Hospital Medical Center and the State Route 24 freeway (see Figure 1). The project site is bounded by Martin Luther King, Jr. Way on the west; 53rd Street on the north; 52nd Street on the south; and Highway 24 on the east. The Children's Hospital Medical Center is directly south across 52nd Street from the site. The south-bound on-ramp and the north-bound off-ramp of State Route 24 to and from Martin Luther King, Jr. Way and 52nd Street is adjacent to the project site.

The project site is roughly rectilinear in configuration, and has an area of about 177,000 sq. ft. (4.06 acres). The portion of the project site to the west of Dover Street currently contains 15 single-family residential structures, five of which are privately owned and remain in residential use (see Figure 2). One of the residential structures is owned by the hospital, and is currently vacant. The other nine residential structures, and a temporary structure on that portion of the project site, are used for Hospital functions. Adjoining off-street surface parking lots on the site contain a total of 217 spaces. These parking lots were developed during the 1970s as off-street parking for employees and visitors of Children's Hospital, and are accessed from 52nd Street. Exits from the lots are at Dover Street and Martin Luther King Jr. Way. The portion of the project site to the east of Dover Street currently contains the Family Center (operated by Children's Hospital), and eight residential structures, four of which are owned by the Hospital and four of which are privately owned and in residential use (see Figure 2).

The project site is zoned R-50 (Medium-Density Residential) on the southern half of the block west of Dover Street (see Figure 10 on p. 48). The rest of the site is zoned R-40 (Garden Apartment Residential). Surrounding land uses immediately north, and west are predominantly single-family residential. Land uses to the east are predominately commercial and multiple-family residential. The existing campus of Children's Hospital is immediately south across 52nd Street from the site, and is located within an S-1 (Medical Center) zone. Some neighborhood commercial uses are along Martin Luther King, Jr. Way, in the site vicinity.



FIGURE 1
SITE LOCATION

Source: U.S. Geological Survey and ESA

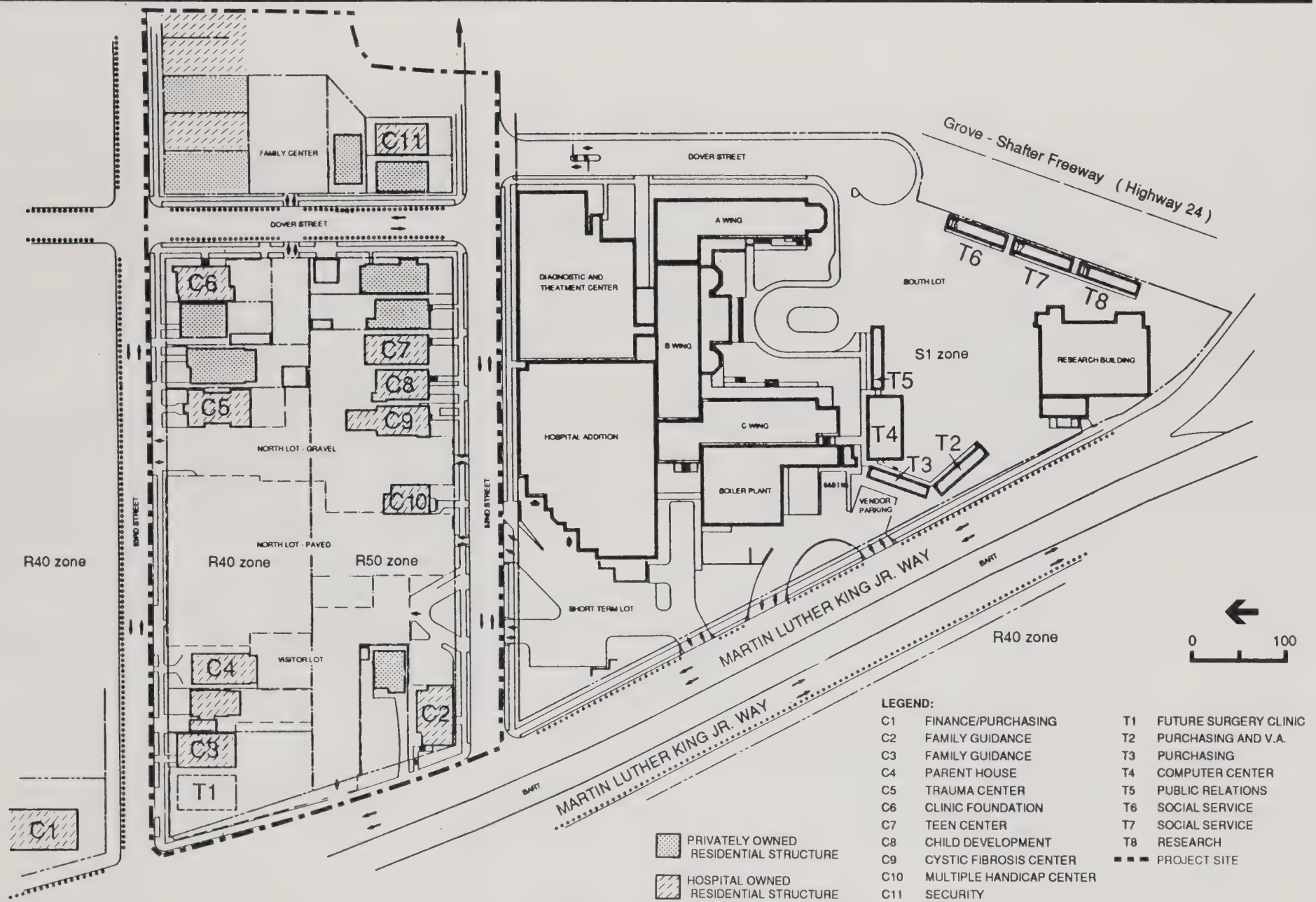


FIGURE 2
LAND USES AND OWNERSHIP OF USES ON THE
PROJECT SITE AND EXISTING HOSPITAL CAMPUS

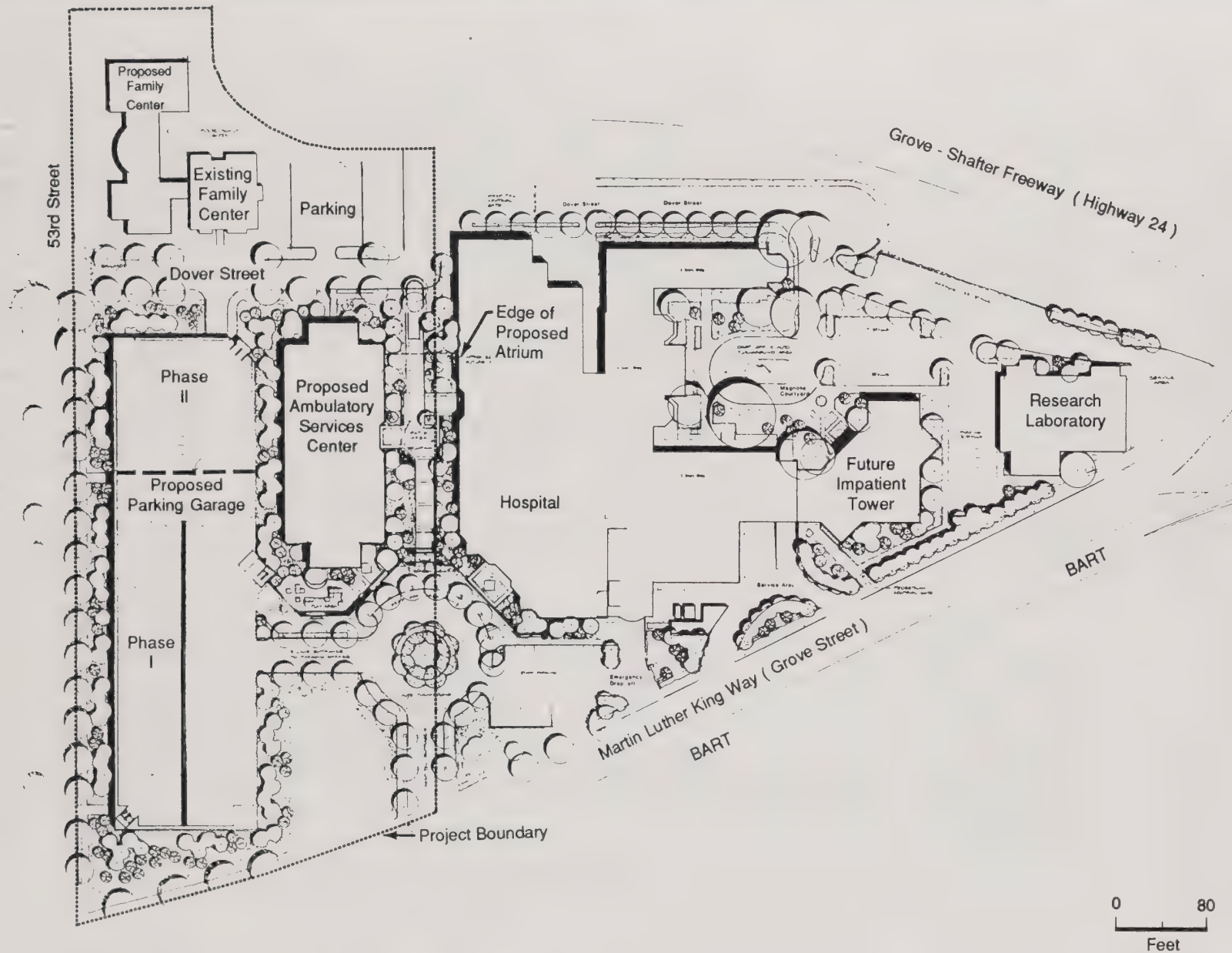
B. PROJECT CHARACTERISTICS

PROPOSED PROJECT

The proposed project would be a General Plan Amendment and rezoning of the site, and vacation of the 52nd Street right-of-way, for development of a new Ambulatory Services Center, Parking Garage, and expansion of the Family Center adjacent to the existing Children's Hospital. The proposed Ambulatory Services Center would be a five-story building containing a total of about 80,000 sq.ft. of floor area. Outpatient services would be provided at the new facility. The new building would incorporate a design with similar building mass, shape and exterior design to that of the existing nursing tower, constructed in 1982, at the northwest corner of the existing campus across 52nd Street from the site. The proposed parking garage would contain about 260,000 sq. ft. on four levels (including rooftop), and would provide about 800 off-street parking spaces. Pedestrian access between the parking garage and Ambulatory Services Center would be provided at the western end of the Ambulatory Services Center. The proposed Family Center addition would add about 22,000 sq. ft. of floor area, in a three-story horizontal addition to the existing 13,750-sq. ft. Family Center building. A 16 space surface parking lot would be developed adjacent to the south-eastern corner of the intersection of Dover and 53rd Streets (see Figure 3).

The project would consolidate numerous Hospital activities now occurring in the Hospital-occupied former residential structures on the portion of the site that is west of Dover Street. Outpatient medical activities occupy a total of about 16,600 gross sq. ft. of floor area in nine of the residential structures on this portion of the site. These activities include Family Guidance services, the Child Development Center, Multiple Handicap Center, and Parent-Infant Project. Offices for Pediatric surgeons on the site consist of 2,160 gross sq. ft. in a temporary (trailer) building. Thus, a total of 18,760 gross sq. ft. of floor area now used for Hospital activities on the project site would be replaced; the amount of new floor area on the site, for outpatient activities in the new Ambulatory Services Center, would therefore be about 61,240 gross sq. ft. The expanded Family Center would add about 22,000 gross sq. ft. of residential space (temporarily housing families of inpatient children) to the portion of the site east of Dover Street.

Development of the proposed parking garage would provide 800 off-street parking spaces for Hospital employees and visitors. Development of the garage and other elements of the project



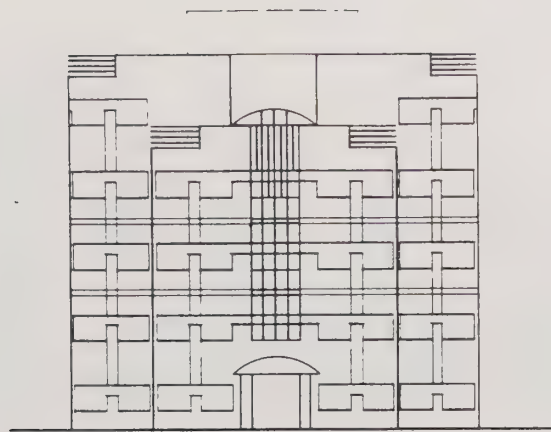
proposed for the site would require the removal of a total of 217 off-street parking spaces currently on the site, and would also remove 13 on-street parking spaces on 52nd Street between Dover Street and Martin Luther King, Jr. Way. Thus, the parking garage would add 583 additional off-street spaces to the site, thereby increasing the total parking supply in the Hospital vicinity by 570 spaces.

The proposed project would contain a total of about 362,000 sq. ft. of floor area (the total proposed construction site area is about 177,000 sq. ft.) Under the Oakland Zoning Regulations, off-street parking facilities are excluded from floor area calculation. Thus, the floor area ratio (FAR) of the project would be about 0.58:1 for the new construction site (based on 102,000 sq. ft. of floor area in the Ambulatory Services Center and Family Center Expansion).

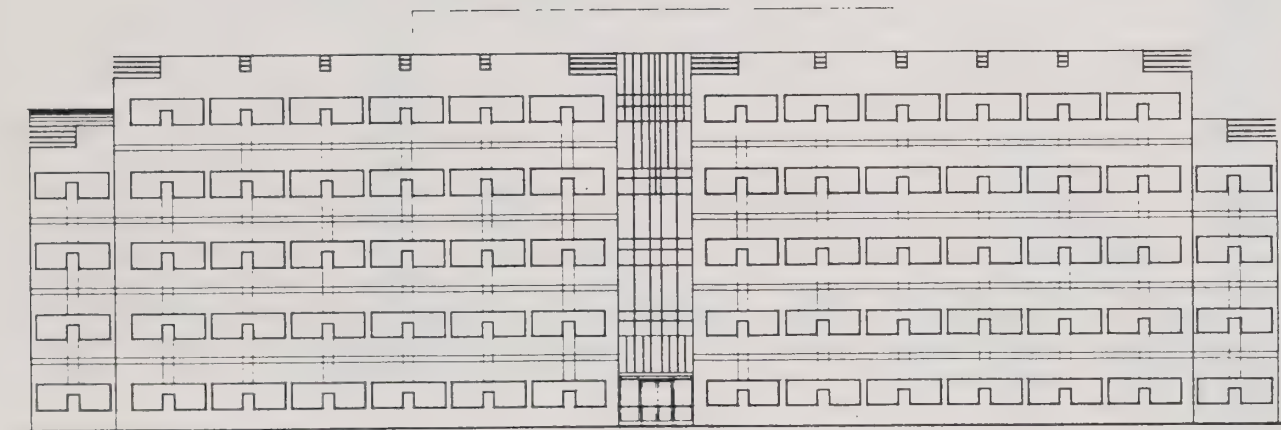
Pedestrian access to the project and to the northern entrance to the existing Hospital would be through a pedestrian atrium, developed along most of the current right-of-way of 52nd Street. Pedestrian pick-up and drop-off areas would be provided at an on-site circular vehicle access drive, at the west end of the existing 52nd Street right-of-way accessed from Martin Luther King, Jr. Way; and from a pedestrian drop-off area at the east end of the existing 52nd Street right-of-way. Vehicular access to the parking garage would be from the on-site circular access drive and from Dover Street. Vehicular exit from the garage would be to Martin Luther King Jr. Way and to Dover Street/52nd Street.

Public space would be provided on the project site, totaling about 115,050 sq. ft. (2.64 acres). The largest public space (about 20,000 sq. ft.) would be a covered atrium providing pedestrian access through the hospital campus, along the existing 52nd Street right-of-way between the circular vehicle access drive off Martin Luther King, Jr. Way and Dover Street. Beneath the glass atrium roof would be trees and benches available for use by neighborhood residents and Hospital visitors and employees. Landscaping would also be provided within the on-site setback area containing the circular access drive, and at the perimeter of project buildings along the site frontages at Martin Luther King, Jr. Way, 52nd Street, and Dover Street.

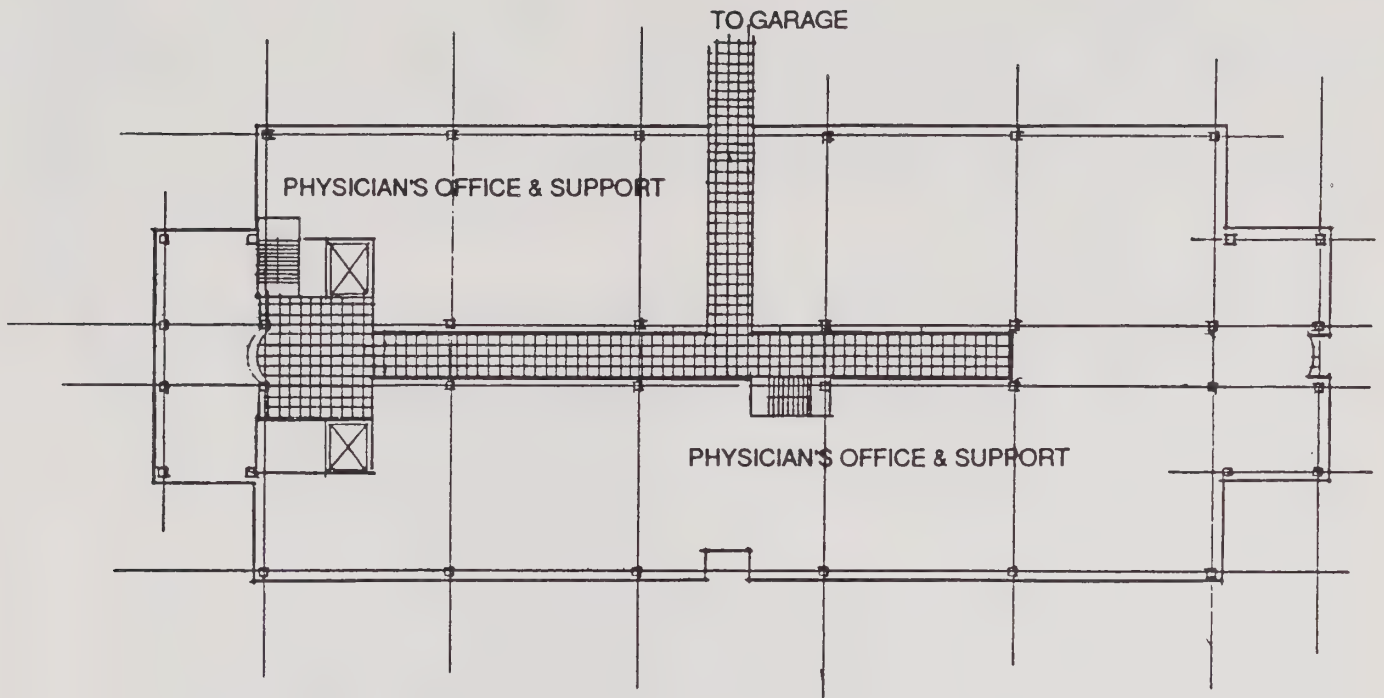
Development of the project as proposed would require vacating, as public streets, the 52nd Street right-of-way, between Dover Street on the east and Martin Luther King Jr. Way on the west, and vacating the Dover Street right-of-way, between 52nd Street and 53rd Street. The steps required for vacating of the streets would be the following: 1) The project sponsor or



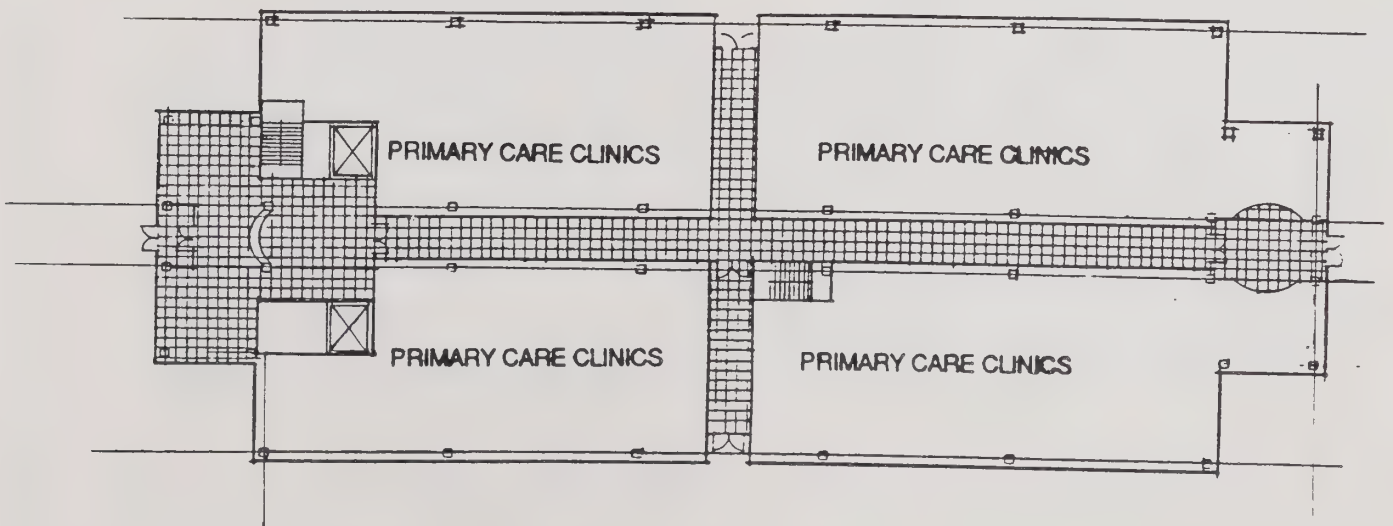
East and West Elevation



North and South Elevation

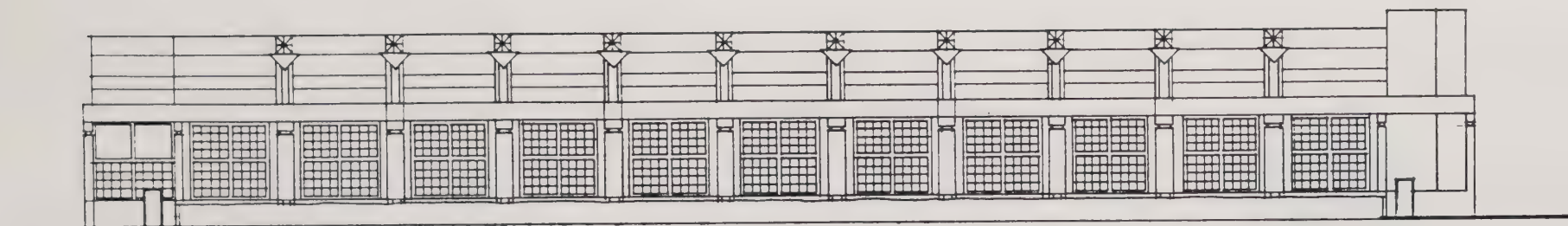


Ground Floor

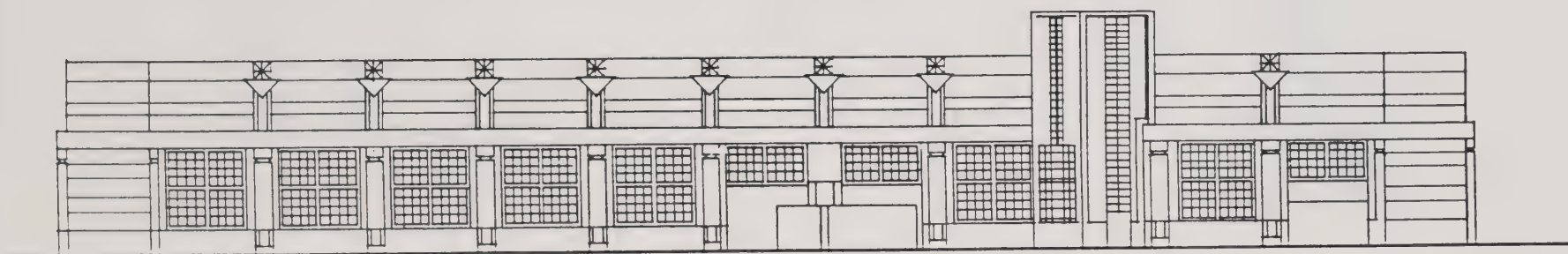


Typical Upper Floor

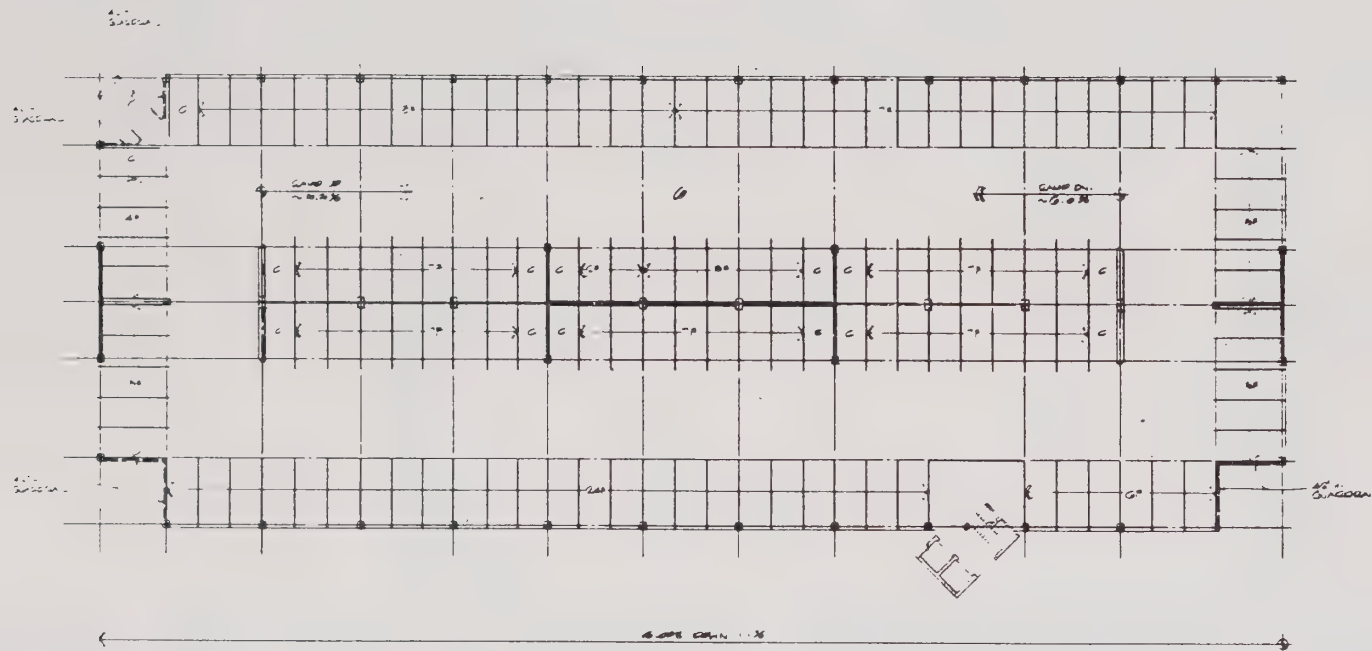
FIGURE 5
AMBULATORY SERVICES CENTER
BUILDING FLOOR PLATES



North Elevation (53rd Street)

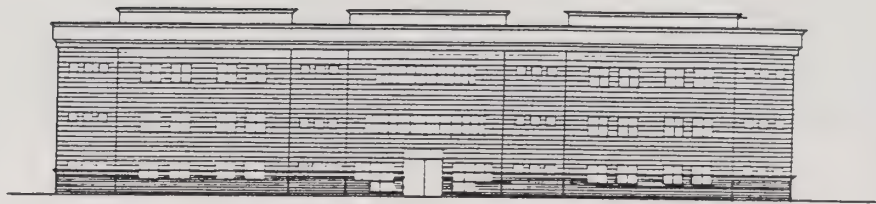


South Elevation

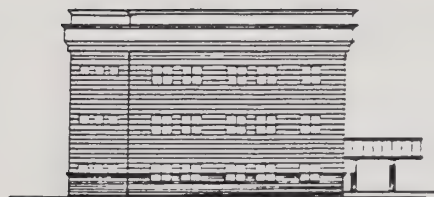


Typical Upper Level

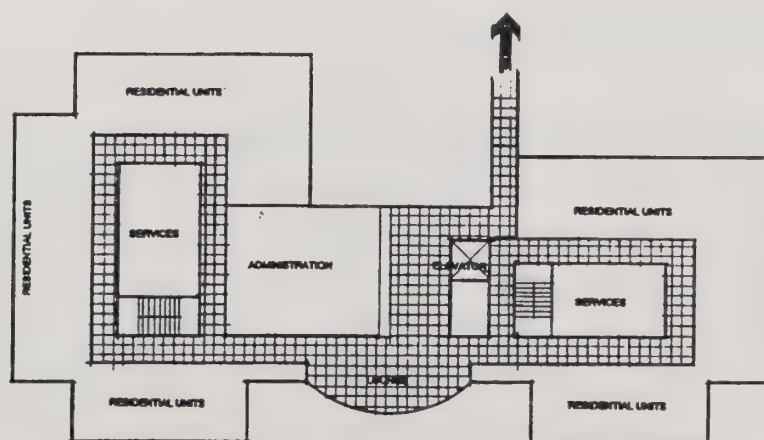
FIGURE 7
PARKING GARAGE FLOOR PLATE



North Elevation (53rd Street)



East and West Elevation



Ground Floor Plate

FIGURE 8
FAMILY CENTER EXPANSION BUILDING
ELEVATIONS AND FLOOR PLATE

authorized agent would file an application with the City Office of Public Works; 2) The application would be reviewed by all appropriate City departments to determine the probable effects of street closure; 3) If the City Public Works Coordination Committee endorses the proposed street vacation, affected utility companies would subsequently be contacted to establish the location and extent of utility lines within the street right-of-way; 4) A Resolution of Intention would be prepared by the Office of Public Works; 5) The Office would conduct two separate public hearings, scheduled about one month apart, to receive public comments on the proposal./1/

The project architect has contacted appropriate utility providers regarding existing utility lines within the 52nd Street right-of-way./2/ In response to replies to the inquiries, the proposed pedestrian atrium and open space was conceptually developed in order to provide emergency access to underground utility infrastructure while also providing on-site open space for use by neighbors, employees and visitors to the proposed project.

The first phase of project construction, anticipated to begin in early 1990, would develop 600 parking spaces (out of a total of 800 to be developed at project build-out) on four levels in the parking garage. The second phase of project construction would involve completion of the parking structure (adding 200 spaces), construction of the Ambulatory Services Center, closure of the 52nd Street and Dover Street right-of-ways, and development of the pedestrian atrium in the former 52nd Street right-of-way. The second construction phase is anticipated to begin in early 1992. The third and final phase of project construction would begin in 1993, and would consist of the Family Center expansion./3/

C. PROJECT SPONSOR'S OBJECTIVES

Children's Hospital proposes to develop the Ambulatory Services Center on the project site in order to improve the efficiencies of both Inpatient Acute Care and Outpatient clinic services by physically separating the locations of the two operations. The proposed Ambulatory Services Center would contain outpatient service activities. The improvements in efficiency of services would provide additional space for outpatient treatment and therapy, and would also provide space within the main hospital for additional inpatient beds. Children's Hospital proposed to expand the existing Family Center in response to demonstrated need for short-term housing in the Hospital vicinity for families of Inpatient children.

The parking garage is proposed by the Hospital to be developed in order to redirect vehicular traffic away from the existing Hospital campus, thereby improving vehicular circulation within and around the Hospital. Additionally, it is the project sponsor's objective to reduce Hospital-related on-street parking in the immediate neighborhood by providing approximately 583 additional parking spaces (a net increase of 570 spaces including removal of 13 spaces on 52nd Street) on the Hospital campus for Hospital employees and visitors. Operation of the proposed Ambulatory Services Center would also add to the demand for parking spaces in the hospital vicinity.

In late 1985, Children's Hospital retained American Medical Buildings (AMB) to develop plans for a parking structure on the site of the project currently proposed. In order to ascertain the amount of parking needed for Hospital operations, AMB conducted an inventory of the total supply of available parking spaces on the project site and the Hospital campus, and on streets in the immediate vicinity. The available supply of off-street spaces totaled 537, including 217 spaces on the project site west of Dover Street, 25 spaces on the project site east of Dover Street, and a total of about 295 spaces within about two blocks of the site (including 145 spaces on the existing Hospital campus). Since the parking survey was completed, the new Family Center has been developed east of Dover Street on the site of the 25-space lot. On-street parking spaces numbered 315 within three blocks of the Hospital campus. Parking demand by Hospital employees was estimated by distribution of a survey questionnaire, and by Hospital patients and visitors by Hospital records. Results of the parking demand estimates revealed an average 203-space shortfall (demand compared to available supply) during times of peak demand (between about 7:00 a.m. and 5:00 p.m. on weekdays)./4/

Expansion of the Hospital campus is physically blocked to the west, south and east. The project sponsor does not consider expansion of facilities to the west, across Martin Luther King, Jr Way, to be feasible primarily because of distance and safety considerations for pedestrians traveling between the existing hospital and proposed facilities. The project sponsors objective in proposing closure of 52nd Street between Dover Street and Martin Luther King, Jr. Way is to enhance the safety of pedestrians traveling between the existing Hospital Campus and the project site; pedestrian safety could not be ensured if new development were to occur to the west of Martin Luther King, Jr. Way. The Highway 24 freeway, adjacent to the east and south of the Hospital campus, prevents expansion of Hospital facilities to the south or east. The existing Hospital campus contains minimal available space for development of new facilities; sufficient space is not available for development of both the Ambulatory Services Center and a parking facility of sufficient size to meet current needs for parking space.

D. PREVIOUS HOSPITAL DEVELOPMENT HISTORY/5/

In September of 1914, the Baby Hospital was dedicated at the southwest corner of the current Hospital site block, fronting Grove (now Martin Luther King, Jr. Way) and 51st Streets. It contained 30 beds and five private rooms, and occupied the former McElrath Mansion structure. In March of 1928, the new Baby Hospital was dedicated. The new hospital was constructed adjacent to the north and east of the original, and contained capacity for 77 patients.

In 1930, the Baby Hospital was renamed Children's Hospital of the East Bay. In October of 1948, a new wing containing sixty-five patient beds was completed adjacent to the west of the existing Hospital building, resulting in a total capacity of 142 patients. The 51st Street right-of-way was closed to through traffic between Grove and Dover Streets, providing an on-site access roadway and turn-around adjacent to the south side of the Hospital. A fourth-floor surgery addition was added to the 1948 Hospital wing in 1958. In 1957, eleven existing residences fronting 52nd and Dover Streets on the Hospital block were purchased and removed for off-street parking lots. In September 1959, a research laboratory was dedicated on a site to the south directly across 51st Street from the existing Hospital. A diagnostic and treatment center, developed adjacent to the north side of the Hospital and fronting 52nd Street, were dedicated in 1962. In 1963, a nurses' dormitory was constructed on the Hospital block at the northwest corner of the intersection of Grove and 52nd Streets. The Hospital was renamed Children's Hospital Medical Center of Northern California in 1964.

Adjacent development during the 1960s altered the Hospital's vehicular access and imposed new constraints on potential expansion of the facility. In 1966, Highway 24 was opened immediately to the east of the Hospital, thereby eliminating the use of 51st Street as access to the Hospital, and eliminating the possibility of future Hospital expansion in that direction. In 1967, the elevated BART line was completed along Grove Street, immediately west of the Hospital, thereby eliminating the potential expansion of the facility across Grove Street (now Martin Luther King, Jr. Way).

During the early 1970s, the Hospital Board of Directors voted to relocate inpatient facilities to a location near other hospitals at 'Pill Hill', east of the Children's site. The decision was reversed, and in 1975 a third floor was added to the diagnostic and treatment center and a second floor was also added to the research laboratory. Many of the houses on the block bounded by 52nd Street; 53rd Street; Grove and Dover Streets (the current project site) were acquired at that time; some

were utilized for Hospital functions while others were removed for Hospital parking lots. In 1982, the five-story Nursing Tower was completed on the northwestern corner of the Hospital site.

The existing Family Center was developed in 1987 to provide short-term housing for the families of inpatient children, in response to an apparent lack of low-cost, semi-transient housing in the hospital vicinity.

NOTES - Project Description

- /1/ Ted Matsumoto, Engineer, City of Oakland Department of Public Works, telephone conversation, June 20, 1988.
- /2/ Bissell and Karns, Inc., Consulting Engineers, memorandums to Ratcliff Architects, dated September 17, 1987, and October 16, 1987.
- /3/ Burns Cadwalader, The Ratcliff Architects, letter to Marty Abell of Environmental Science Associates, Inc., May 12, 1989.
- /4/ American Medical Buildings, Parking Study for Children's Hospital Medical Center Oakland, California, February 18, 1986.
- /5/ The Ratcliff Architects, Children's Hospital Oakland Master Site Plan, July 14, 1987.

IV. ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

A. LAND USE, COMPREHENSIVE PLAN AND ZONING

SETTING

Land Use

The project site is currently occupied by 23 single-family residential buildings, and paved parking lots for Hospital employee and visitor vehicle parking. The portion of the site adjacent to the west of Dover Street, bounded by Martin Luther King, Jr. Way, 53rd Street, and 52nd Street, contains a total of 15 single-family residential structures. Five of these structures are in private (non-Hospital) ownership, and are in residential use. The other ten structures (formerly in residential use) are now used for activities related to the Hospital (see Figure 2). These Hospital activities on that portion of the site include: Family Guidance Services; Parent-Infant Project; Pulmonary Center; Child Development Center; Cricket's Corner; and Multiple Handicap Center. The pediatric surgeons' building (housed in a trailer) is also on that portion of the site. Off-street parking lots, containing a total of 217 spaces, occupy the center area of that portion of the site. The portion of the site east of Dover Street, is bounded by Dover Street, the westbound on-ramp to Highway 24, 53rd Street, and 52nd Street. It contains eight single-family residential structures, four of which remain in private residential ownership and use. The other four of these structures are owned by the Hospital. One of the structures contains the security office for the Hospital. The Hospital-operated Family Center is contained in a newly-constructed building fronting Dover Street (see Figure 2).

Existing land uses in the site vicinity include medical, residential and commercial (see Figure 9). Adjacent to the south of the site, across 52nd Street, is the existing campus of Children's Hospital. At the northeast corner of the intersection of 53rd Street and Martin Luther King, Jr. Way, adjacent to the north of the project site, are finance, purchasing and personnel offices of Children's Hospital. Single-family residential is the predominant use to the north, west and south within about two blocks of the site. Comparable in density and structural type to remaining single-family residential uses on the project site, single-family residential use occupies most of the area within two blocks west of Martin Luther King, Jr. Way, west to



LEGEND

..... PROJECT SITE

 COMMERCIAL

 SINGLE-FAMILY RESIDENTIAL

 MULTIPLE-FAMILY RESIDENTIAL

 MEDICAL

 PARKING LOT OR GARAGE

 VACANT PARCEL(S)

 RELIGIOUS



FIGURE 9
PREDOMINANT LAND USES
IN THE SITE VICINITY

Market Street. The area within two blocks north of the site is also predominantly the same density and type of residential use. Multiple-family residential use accounts for a small portion of use surrounding the site; to the west of Highway 24, there are two relatively large apartment complexes, one north across 53rd Street from the site, and the other west across Martin Luther King Jr. Way from the site. Concentrations of multiple-family apartment complexes are to the east of Highway 24, along the east side of Shattuck Avenue, north of 50th Street, and immediately west of commercial uses fronting the west side of Shattuck Avenue, east of Highway 24. The apartment complexes in the site vicinity are generally low-rise (two stories), containing less than 50 units.

Commercial uses in the vicinity are concentrated along Telegraph Avenue, Shattuck Avenue south of 52nd Street, and adjacent to the intersection of 51st Street and Martin Luther King, Jr. Way, southwest of the Hospital. Commercial establishments are also located at the intersections of 54th and 55th Streets with Martin Luther King, Jr. Way. The commercial uses along Telegraph Avenue are generally more intensive retail establishments that serve customers of surrounding residential and employment centers, such as grocery stores, liquor stores, banks and restaurants. Convenience stores and service outlets tend to serve the immediate area, and characterize commercial "pockets" along Martin Luther King, Jr. Way north of 53rd Street.

Comprehensive Plan

The Land Use Element of the Oakland Comprehensive Plan designates the project site as Low-Medium Density Residential. The existing Children's Hospital site, directly south of the project site, is designated Institutional or Government, Medical. The Land Use Element defines the Low-Medium Density Residential designation as 2,500 sq. ft. to 4,999 sq.ft. of land (lot area) per housing unit./1/ The higher-density residential uses adjacent to the north of the project site, adjacent to the west across Martin Luther King, Jr. Way from the site, and immediately east of the site and Highway 24 are designated Medium-Density Residential (defined as 1,500 sq. ft. to 2,499 sq. ft. of lot area per housing unit)./1/ Commercial uses along Telegraph Avenue, Shattuck Avenue south of 52nd Street, and along Martin Luther King, Jr. Way southwest and north of the site are designated Commercial. Under the Land Use Element, this designation includes retail, service and office uses.

Policies of the Housing Element of the Comprehensive Plan, which relate to the residential uses currently on project site, include the following (p. 40):/2/

IV. Environmental Setting, Impacts and Mitigation Measures

- " The City supports the production and conservation of sufficient numbers of assisted and market-rate housing units to meet the needs of Oakland's large families." (Policy 4)
- " The City will attempt to limit the demolition of residential units or their conversion to nonresidential uses." (Policy 6)
- " The City, where economically feasible, will cause to relocate, rather than demolish, residential property acquired for public or private purposes and urges Federal and State agencies to use a similar approach." (Policy 10)

Policies of the Land Use Element specific to regulation of land use, mixture and transition between differing adjacent land use types includes the following (p. 22 of the Land Use Element):/1/

- "1. The City will employ zoning or other land use regulations to ensure that land uses are compatible with their surroundings and to promote appropriate design and on-site conditions for residents or other users.
- "2. The City will see that the land use regulations applying to each area are compatible with its particular desired functions and character, and where appropriate provide for an orderly transition of use type or density over time.
- "5. In general the boundary between areas or zones of potentially inharmonious land uses should, where practicable, run along rear property lines rather than down the middle of a street."

Policies of the Land Use Element, concerning residential land uses and non-residential land uses mixed, include the following, (p. 39 of the Land Use Element):/1/

- " Residential areas should be protected from activities which produce excessive noise, dirt or odors or generate heavy traffic.
- " The City strongly encourages the moving onto flatland vacant lots, where appropriate, of dwellings which might otherwise be demolished for projects such as park expansions, street widenings, or private construction."

The Land Use Element of the Oakland Comprehensive Plan indicates that the project site, existing Children's Hospital campus, and site vicinity west of Martin Luther King, Jr. Way are within a designated Inundation Hazard area, prone to flooding under a 100-year flood. Inundation of the site vicinity could result in the event of failure of the Claremont Creek reservoir, located adjacent to Claremont Avenue east of Ashby Avenue, at the base of the Berkeley Hills. The site vicinity could also be subject to inundation from overflow of reservoir waters, as a result of earthquake-generated seiches or landslides into the reservoir./3/

The Oakland Comprehensive Plan also contains The Oakland Policy Plan, (adopted in 1974 and amended through 1980), which as a component of the City's Comprehensive Plan is an "official expression of the City Council's intentions" in decision-making as it effects citizens of the City./3/ The Policy Plan contains both goals and policies. Goals and policies of The Policy Plan which could apply to the current residential uses on the project site include the following:/4/

"The City recognizes that housing is a valuable resource that should be carefully conserved and maintained and will take all necessary steps to prevent damage to the City's occupied or vacant residential property." (Substandard Housing Policy 7)

"The City, where economically feasible, will cause to relocate, rather than demolish, residential property acquired for public purposes and urges Federal and State agencies to use a similar approach." (Housing Production Policy 9)

The Oakland Policy Plan also contains policies on land-use decision making. Those which may relate to the project site include:/4/

"In considering those land use questions which mostly affect a particular neighborhood or other area, the City will give substantial weight to the opinions of the local citizens." (Decision-Making Policy 2)

Applicable Policies of the Policy Plan related to the existing commercial uses adjacent to the project site include:/3/

"Development in commercial and industrial areas should be limited in intensity, or limited to low-rise construction, where and to the extent this is appropriate to:

"protect the area's desired character where that depends significantly on moderate or consistent building scale or appearance, or on openness of development;

"help protect a local concentration of structures with architectural or historical interest;

"avoid creating or aggravating significant traffic or parking problems." (Development Intensity Policies 3, 3a, 3b and 3d)

The 1985 Trafficways Map (Map 6) of the Policy Plan designates 52nd Street, between Telegraph Avenue and Martin Luther King, Jr. Way, as an Arterial Street, defined as follows:/4/

"Arterial streets should serve as the basic network for through-traffic flow between different sections of the city. They should connect freeways and expressways with collector streets. They should define rather than sever residential neighborhoods, industrial tracts, and commercial areas." (Trafficways Policy 9)

Zoning

The proposed project site is zoned R-40 and R-50 (see Figure 10). The southern half of the portion of the project site west of Dover Street is zoned R-50 (Medium-Density Residential). The northern half of the site west of Dover Street, and all of the site east of Dover Street, is zoned R-40 (Garden Apartment Residential).

The R-50 Zone is intended to "create, preserve and enhance areas for apartment living at medium densities in desirable settings, and is typically appropriate to areas of existing medium-density residential development."/5/ Permitted activities within this Zone are permanent residential, and limited Civic activities. Conditionally permitted activities in this Zone include Civic Activities such as Community Assembly, Community Education, Non-Assembly Cultural, Residential Care and Health Care. Off-street parking activities are also Conditionally Permitted, subject to specific conditions of the Regulations./6/ In an R-50 Zone, the minimum lot area required is 4,000 square feet. The maximum density of residential facilities permitted in this zone is two dwelling units (on lots containing 4,000 sq. ft. or more). Conditionally permitted density allows an increase in the number of dwelling units per lot, over the basic maximum density permitted, of approximately one additional dwelling unit for each 1,500 sq. ft. of lot area. The maximum height of buildings is 30 ft. Minimum required yard setbacks in this Zone are basically 15 feet, four feet, and 15 feet for front, side and rear yards, respectively. Minimum usable open space required is 200 square feet per dwelling unit./7/

The R-40 Zone is intended, according to Oakland Zoning Regulations, to "create, preserve, and enhance areas containing a mixture of single- or two-family dwellings and garden apartments in spacious settings for urban living, and is typically appropriate to attractive areas of existing lower medium density residential development."/8/ Activities permitted and activities conditionally permitted in an R-40 Zone are essentially the same as in an R-50 Zone./9/ In an R-40 Zone, the minimum lot area required is 5,000 square feet.



LEGEND

- C-10 LOCAL RETAIL
- C-30 DISTRICT THOROUGHFARE COMMERCIAL
- C-35 DISTRICT SHOPPING COMMERCIAL
- R-40 GARDEN APARTMENT
- R-50 MEDIUM DENSITY RESIDENTIAL
- R-70 HIGH DENSITY RESIDENTIAL
- S-1 MEDICAL CENTER
- PROJECT SITE BOUNDARY



FIGURE 10
ZONING DESIGNATIONS IN
THE SITE VICINITY

Source: City of Oakland and ESA

The maximum density of residential facilities permitted in this zone is two dwelling units on lots of 5,000 sq. ft. or more. Conditionally permitted density allows one or more additional dwelling units on lots with at least 2,500 sq. ft. of area per dwelling unit. The maximum height of buildings is 30 feet, as in the R-50 Zone. Minimum required setbacks are basically 20 feet, five feet, and 15 feet for front, side and rear yards, respectively. Minimum usable open space in the R-50 Zone is 300 square feet per dwelling unit./10/

Zones adjacent to the project site include R-40; R-50; S-1 (Medical Center); C-10 (Local Retail); C-30 (District Thoroughfare); and C-35 (District Shopping). The S-1 Zone consists of the existing Children's Hospital Campus. Permitted and conditionally permitted activities in the S-1 Zone include Residential, Civic (including Nursing Home and Health Care), and Commercial (Medical Service)./11/ The C-10 Zone lies adjacent to the western side of Martin Luther King, Jr. Way south of 49th Street, about three blocks south of the project site. Another C-10 Zone lies along Martin Luther King, Jr. Way adjacent to the intersections of 54th and 55th Streets. Permitted and conditionally permitted activities in the C-10 Zone include Residential; Civic; Commercial (primarily retail sales and services); and Agricultural./12/ The C-30 Zone lies adjacent to the east side of Martin Luther King, Jr. Way, immediately south of the existing Children's Hospital campus. The C-35 Zone lies adjacent to the west side of Martin Luther King, Jr. Way, between 49th Street and 51st Street, immediately southwest of the existing Hospital campus. Commercial uses along Telegraph Avenue east of Highway 24, between 47th and 52nd Street, are also regulated under C-35 Zone Specifications. Permitted and conditionally permitted activities in the C-30 and C-35 Zones are generally of the same type, although the intensity of permitted activities differs between the Zones. Permitted activities in the two Zones include Residential, Civic (including Nursing Home and Health Care); and Commercial (including medical service, various sales and services)./13/

IMPACTS

Land Use

Development of the proposed project would replace 23 single-family residential structures and Hospital parking lots with new, relatively high-intensity medical and related vehicle parking uses. Development of the proposed Ambulatory Services Center and parking garage would replace five existing dwellings in private ownership, one vacant residential structure owned by the Hospital, and nine residential structures containing Hospital activities on the site with new relatively high-intensity non-residential uses. Full development of the project as currently

proposed would complete the total replacement of residential uses with Hospital-related uses on the site block bounded by Dover Street, Martin Luther King, Jr. Way, 52nd and 53rd Streets, which was begun during the 1970s as residences were removed for Hospital parking lots. The first phase of project development, consisting of a four-story 600-space parking garage, would be constructed on the site of surface parking lots and four residential units currently owned by the Hospital. As the additional properties currently in private ownership are acquired by the hospital through negotiated purchase, a 200-space parking garage expansion and the Ambulatory Services Center would be developed on the rest of the site west of Dover Street. The proposed expansion of the Family Center, including a 16-space surface parking lot, would require removal of eight single-family dwellings, four of which are currently in private ownership and four of which are owned by the Hospital. Expansion of the Family Center would occur once the Hospital has acquired all of the properties through negotiated purchase. Development of Hospital-related uses on the project site west of Dover Street would be a northward expansion of medical and related facilities onto a city block that was formerly occupied entirely with residential uses, at an intensity generally characteristic of development on the existing Hospital campus immediately south of the site. Expansion of the Family Center on the site east of Dover Street would replace existing residential uses with medical-related uses.

The northward expansion of the Hospital uses into a low-density residential area, and the eventual removal from the project site of a total of 23 residential structures for build-out of the proposed project may be considered a significant impact, particularly in view of the relatively low-intensity residential character of the neighborhood adjacent to the north side of 53rd Street east of Martin Luther King, Jr. Way. This expansion of relatively high-intensity medical-related uses could be perceived as a continuation of the Hospital's historic expansion and replacement of relatively low-intensity residential uses (see Section III, Project Description, for discussion of the Hospital's development history). Additionally, development of the project would be an intensification of land use in an area currently of relatively low-intensity uses (except for the existing Hospital).

Operation of the proposed Ambulatory Services Center would require approximately 125 additional employees. Additional employees and patient visitors in the area, resulting from development of the project could increase the demand for retail goods and services in the vicinity, particularly from existing retail goods and service providers in the immediate site vicinity, such as those located along Martin Luther King, Jr. Way, Shattuck and Telegraph Avenues in proximity to the Hospital campus.

Development of the project could induce owners of parcels in the site vicinity to attempt to redevelop sites of existing relatively low-density residential uses with higher-density non-residential uses. The gradual replacement of former low-intensity residential uses with relatively high-intensity medical uses could also encourage redevelopment of residential sites in the vicinity with higher-density residential uses. The expansion of Hospital facilities could encourage private physicians to purchase existing residential structures in the Hospital vicinity, for conversion to medical offices. The expansion of Hospital facilities could also encourage providers of medical-related services, such as equipment and supply rentals, to expand or to locate within the vicinity of the project site and Hospital campus.

Comprehensive Plan

The proposed 800-space parking structure, Ambulatory Services Center and Family Center expansion developments would not be consistent with the General Plan's current Low-Medium Density Residential designation of the project site. Therefore, an amendment to the Comprehensive Plan from Residential to an Institutional or Government, Medical designation would be necessary. The proposed closure of 52nd Street as a public right-of-way would require an amendment to the Trafficways Map of the Oakland Comprehensive Plan.

As discussed under Comprehensive Plan Setting above, The Oakland Policy Plan is "an official expression of the City Council's intentions" in decision making./4/ Therefore, conformance of the proposed project and related General Plan Amendment and Zone Change actions to The Policy Plan is expected to be reviewed by City Council, as part of the Council's actions regarding project approval.

The proposed project would be consistent with some of the applicable policies of the Oakland Comprehensive Plan and the Oakland Policy Plan, and would not be consistent with some other applicable policies of the Comprehensive Plan and the Policy Plan. Table 1, below, compares the proposed project to these policies.

Zoning

Development of the proposed Ambulatory Services Center (about 80,000 square feet); the 800-space parking structure; the Family Center expansion (about 22,000 square feet); and 115,050-square-feet of developed open space would require a zone change of the project site from the current R-50 (Medium-Density Residential) and R-40 (Garden Apartment Residential) to an S-1 (Medical Center) Zone.

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN

Land Use Element Policy

"In deciding on major land use issues, the City will seek to consider the full range of direct and indirect economic, social, physical environmental, and public service factors involved, giving special attention to possible impacts on lower-income persons, the elderly, or members of minority groups." (p. 19)

"In considering those land use questions which mostly affect a particular neighborhood or other area, the City will give substantial weight to the opinions of the local citizens." (p. 19)

"To the extent compatible with noise levels and other environmental factors, the intensity of development at each point in the city should be related to the degree of accessibility there." (p. 20)

Relationship of Project

Interpretive. The City Planning Commission will hold a public hearing on the Draft EIR during the CEQA-mandated 45-day public comment period, and will receive oral and written comments on the content of the Draft EIR. Responses to both oral and written comments received during the public review period will be prepared by City Planning staff and reviewed by the City Planning Commission in determining whether or not to certify the EIR as accurate, objective and complete. The decision-making process of the City Planning Commission regarding approval of the proposed rezoning of the site for the project, and approval of permit applications for removal of existing residential structures on the site and for project construction will include full consideration of impacts of the proposed development on the adjacent neighborhood and its residents, as described in the Final EIR on the proposed project. Approval of the proposed vacation of the public right-of-way of 52nd Street between Dover Street and Martin Luther King, Jr. Way, and of Dover Street between 52nd and 53rd Streets will include two public hearings conducted by the Department of Public Works.

Interpretive. Community opinion will be solicited by the City Planning Commission in public hearings on the proposed rezoning and Comprehensive Plan Amendment required for the proposed development of the site. The Department of Public Works will conduct two public hearings on the proposed closure of the 52nd Street right-of-way and the Dover Street right-of-way.

Interpretive. Within one block of the project site and hospital operate five AC Transit service lines (routes); additionally the MacArthur BART station is within three-quarters of one mile of the site (see Section IV.C, Transportation). Therefore, the project would be consistent with the policy.

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Land Use Element Policy

"New land uses and density increases should generally be discouraged in areas where the noise levels likely in the foreseeable future exceed what is reasonably acceptable for such uses, except where a project itself has special features which will reduce on-site noise to an acceptable level." (p. 20)

"Electrical, telephone, and related distribution lines should be undergrounded in all commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires may make this unneeded; in appropriate civic, light industrial, or other areas; and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward eventual undergrounding of all existing lines in such places, and significant utility extensions there such as in new subdivisions should be installed underground from the start." (p. 21)

"In deciding on major land use and circulation issues, the City will consider the possible effects on air quality and energy consumption." (p. 21)

Relationship of Project

Interpretive. Alteration in traffic circulation resulting from closure of 52nd Street between Dover Street and Martin Luther King, Jr. Way and project-generated traffic increases would result in an increase (of less than 3 dBA) in the ambient noise levels along roadway segments of 55th Street between Martin Luther King, Jr. Way and Shattuck Avenue, and 45th Street between Martin Luther King, Jr. Way and Shattuck Avenue, and Shattuck Avenue between 52nd and 55th Streets. The ambient noise levels at these locations currently exceed 65 dBA, L_{dn} , the maximum "normally acceptable" noise level for residential areas and hospitals (see Section IV.E, Noise).

Interpretive. Existing telephone facilities adjacent to the site are pole-mounted aerial lines. Electricity is distributed to the site via aerial lines along 52nd Street. Undergrounding of telephone lines and electric transmission lines would be required along the portion of the 52nd Street right-of-way to be vacated as part of the proposed projects. Development of the project would therefore be consistent with this policy. (See Section IV.H, Public Services and Utilities, and Section IV.I., Energy).

Interpretive. The proposed project would not be consistent with this policy. The effect on the eight-hour average CO concentrations at the intersection of 55th Street and Shattuck Avenue in the future would be significant as a result of traffic diversions due to closure of the 52nd Street right-of-way and project-generated traffic, with cumulative increases in 2000 even with implementation of project mitigation measures (see Section IV.D, Air Quality). Project operation would not be expected to have an unavoidable significant adverse effect on energy supplies (See Section IV.I., Energy).

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Land Use Element Policy

"The City will see that all public facilities -- in addition to their begin individually well designed -- form in the aggregate a logical, visible framework which organizes and stimulates private development." (p. 21)

"In general the boundary between areas or zones of potentially inharmonious land uses should, where practicable, run along near property lines rather than down the middle of a street." (p. 22)

Relationship of Project

Interpretive. The proposed project will be evaluated by the Director of City Planning and the City Planning Commission, under discretionary review procedure for the required Amendment to the Comprehensive Plan and rezoning for the site. The project will also be subject to S-1 Design Review Procedure, under Zoning Regulations Section 9300 et. seq., under which an application for Design Review will be reviewed by the Director of City Planning. The application review procedures and subsequent discretionary actions will include an evaluation of the aesthetic effects of the project on adjacent uses, and will evaluate the relationship of project design to existing Children's Hospital facilities (see also Section IV.B, Urban Design and Visual Quality).

Interpretive. The project would require a zone change of the site from the current R-50 and R-40 to an S-1 Zone. The boundary between the project site's S-1 Zone designation, and the R-40 Zone designation for residential uses adjacent to the site, would be along the 53rd Street and Martin Luther King, Jr. Way frontages of the project site. The project site's northern, eastern and western boundaries would front public street and roadway right-of-ways, as opposed to interior property lines. Therefore, the proposed Zone changed with the project would be inconsistent with this policy, in that the boundary of the S-1 Zone and the R-40 Zone adjacent to the site would be located within a public right-of-way.

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND
COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Land Use Element Policy

"The City will employ zoning or other land use regulations to ensure that land uses are compatible with their surroundings and to promote appropriate design and on-site conditions for residents or other users." (p. 22)

"Residential areas should be protected from activities which produce excessive noise, dirt, or odors or generate heavy traffic." (p. 39)

Relationship of Project

Interpretive. Development of the project would require a zone change of the site from the current R-50 (Medium-Density Residential) and R-40 (Garden Apartment Residential) to an S-1 (Medical Center) Zone. The required zone Change for development of non-residential uses in a predominantly residential area will be considered by the City Planning Commission in the decision-making process regarding approval or disapproval of the project. The project will be subject to S-1 Design Review requirements regarding design compatibility of the project elements to each other, to other facilities in the vicinity, and to the visual setting of the site area. The City Planning Director may approve or disapprove the project based on the relationship of project design to specific criteria of Zoning Regulations Section 9304 under which design review approval may be granted (see also Section IV.B, Urban Design and Visual Quality).

Interpretive. The proposed project may conflict with this policy, in that it would be a non-residential (medical) development replacing existing residential uses, and consolidating medical uses that have previously replaced residential uses. The proposed closure of 52nd Street would result in a diversion of traffic to other streets characterized by single-family residential uses in the site vicinity. The project would result in an increase in vehicular traffic and an increase in the ambient noise levels on 55th Street between Martin Luther King, Jr. Way and Shattuck Avenue, on Shattuck Avenue between 52nd and 55th Streets, and on 45th Street between at Martin Luther King, Jr. Way and Shattuck Avenue.

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND
COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Land Use Element Policy

"The City strongly encourages the moving onto flatland vacant lots, where appropriate, of dwellings which might otherwise be demolished for projects such as park expansions, street widenings, or private construction." (p. 39)

"Civic and open space uses should be designed to harmonize with, or where appropriate enhance, their surroundings." (p. 66)

Relationship of Project

Interpretive. Development of the proposed project would result in the permanent removal of nine single-family residences in private ownership and residential uses on the site, and would require the permanent removal of the other 14 single-family residential structures on the site that are owned by the Hospital and are no longer in residential use. If the 23 residential structures on the site were to be relocated to available vacant sites in existing residential neighborhoods in the site vicinity, project development would not result in any loss of residential units in the City. If some or all of the 23 residential structures on the project site were to be demolished for project construction, the project would conflict with this policy.

Interpretive. The proposed project will be subject to Design Review application procedures under Zoning Regulations Section 9300 et. seq., and will therefore be evaluated by the Director of City Planning and the City Planning Commission. The Design Review application will include an evaluation of the potential aesthetic effects of the project on adjacent residential uses. The provision of approximately 2.64 acres of public space on-site, about 20,000 sq. ft. of which would be provided in the pedestrian atrium within the vacated 52nd Street right-of-way, is an element of the project intended by the project sponsor to improve the physical environmental (and thus livability) of the site vicinity by increasing landscaped open space available to residents of the surrounding neighborhood.

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND
COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Land Use Element Policy

"The development intensity of civic uses that are located in a residential area should generally not exceed what is suitable for housing in the same area. Building height should be compatible with the area's desired character." (p. 66)

"The City encourages those civic and open space uses which generate substantial traffic and do not primarily serve local neighborhoods to locate on or near major streets, especially those with good public transit." (p. 66)

Relationship of Project

Interpretive. The proposed project development could conflict with this policy, in that the development would be at a greater intensity than is characteristic of development in adjacent residential areas. Development of the project would require a zone change of the site from the current R-50 and R-40 Residential zones to an S-1 (Medical Center) zone. Residential areas adjacent to the north across 53rd Street and to the west across Martin Luther King, Jr. Way from the site are primarily within R-40 Zone designation. Maximum building height is 30 feet in the R-40 Zone; the proposed project would be three-stories (Family Center expansion), four levels (parking garage structure), and five stories (Ambulatory Services Center), and would therefore exceed the one- to two-story height of residential structures surrounding the site.

Interpretive. The project would be consistent with this policy in that it would be located adjacent to Martin Luther King, Jr. Way (a six-lane arterial) and to State Route 24 (an eight-lane freeway), providing regional access via motor vehicle to the site. Five AC Transit service lines (routes) operate within one block of the site. The MacArthur BART Station is about three-quarters of a mile from the site, providing regional transit service to the Hospital vicinity (see Section IV.C, Transportation).

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND
COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Housing Element Policy

"The City supports the production and conservation of sufficient numbers of assisted and market-rate housing units to meet the needs of Oakland's large families." (p. 40)

"The City will attempt to limit the demolition of residential units of their conversion to nonresidential uses." (p. 40)

"The City, where economically feasible, will cause to relocate, rather than demolish, residential property acquired for public or private purposes and urges Federal and State agencies to use a similar approach." (p. 40)

Oakland Policy Plan Policy

"The City recognizes that housing is a valuable resource that should be carefully conserved and maintained and will take all necessary steps to prevent damage to the City's occupied or vacant residential property." (Substandard Housing Policy 7)

"The City, where economically feasible, will cause to relocate, rather than demolish, residential property acquired for public purposes and urges Federal and State agencies to use a similar approach." (Housing Production Policy 9)

Relationship of Project

Interpretive. Development of the proposed project would result in the permanent removal of nine single-family residences in private ownership and residential use on the site, and would result in the permanent removal of 14 single family residential structures previously converted from residential to hospital-related uses. If the residential structures on the site were determined to be structurally sound and were to be relocated to vacant sites in existing residential neighborhoods in Oakland, the project development would be consistent with these policies. This relocation would be likely to result in an increase in the City's housing supply, if structures previously converted to hospital uses on the site were returned to residential use after relocation. However, if residential structures on the site that are structurally sound were to be demolished for the project, the proposed project development would conflict with these policies.

Relationship of Project

Interpretive. As discussed in the relationship of the project to Housing Element Policies, above, the proposed development would be consistent with policies for conservation of existing housing if the residential structures currently on the project site (including those now in residential use and those now in hospital-related use) were to be relocated to vacant sites in existing residential neighborhoods in Oakland. Such relocation could result in an increase in the City's housing supply if residential structures now in use for hospital activities were to be returned to residential use after relocation. If residential structures on the site were to be demolished, the project would conflict with these policies.

TABLE 1: RELATIONSHIP OF THE PROPOSED PROJECT TO THE OAKLAND COMPREHENSIVE PLAN AND OAKLAND POLICY PLAN (Continued)

Oakland Policy Plan Policy

"'Arterial Streets' should serve as the basic network for through-traffic flow between different sections of the city. They should connect freeways and expressways with collector streets. They should define rather than sever residential neighborhoods, industrial tracts, and commercial areas." (Trafficways Policy 9)

"A citywide system of pedestrianways and bicycle paths will be developed. They should be provided in areas of heavy foot traffic and in locations of unusual visual, community, or historical significance." (Pedestrians and Bikeways Policy 1)

"Every effort will be made through public projects and City ordinances and regulations to develop and enhance a pedestrian-oriented environment, especially in areas where it is anticipated that there will be substantial concentration of shoppers, workers and leisure-time participants. The provision of pollution-reducing people-mover systems will also be encouraged to facilitate trips within such areas." (Pedestrian and Bikeways Policy 2)

Relationship of Project

Interpretive. The proposed closure of 52nd Street between Martin Luther King, Jr. Way and Dover Street would remove a segment of designated "Arterial Street," and would therefore be conflict with this policy in that east-west through traffic flow between Martin Luther King, Jr. Way, State Route 24, Telegraph and Shattuck Avenues would be rerouted to other east-west streets parallel to 52nd Street, including 45th and 55th Streets, both designated 'Collector Streets' (see Section IV.C., Transportation).

Interpretive. The project would include a 20,000 sq. ft. pedestrian atrium, developed with landscaping and public seating areas, within the vacated 52nd Street right-of-way. Although this proposed pedestrian atrium would not be developed as part of an inter-connected city-wide system, the project atrium would be within close proximity to a designated major pedestrian way of the Pedestrianways Map (Map 7), with a terminus at about the intersection of 52nd Street and Claremont Avenue.

Interpretive. The pedestrian atrium proposed to be developed within the 52nd Street right-of-way would be consistent with this policy, in that it would provide for pedestrian circulation between the existing hospital and Ambulatory Services Center for patients, visitors and employees without potential conflict with motor vehicle traffic. The pedestrian atrium would also provide pedestrian seating for use by neighborhood residents, and for employees in the vicinity whether or not associated with the hospital.

Source: Oakland Comprehensive Plan, Oakland Policy Plan, and Environmental Science Associates, Inc.

The zone change required for development of non-residential uses in a predominantly residential area could set a precedent for similar rezoning and assemblage of residential lots in the vicinity of the project site, and elsewhere in The City of Oakland, to zones under which non-residential uses could be developed. The Planning Commission and City Council, in making decisions resulting in approval or disapproval of this project, could provide future direction for the types and intensities of development in the site vicinity.

The City of Oakland Zoning Regulations state that the S-1 Zone is intended to "create, preserve and enhance areas devoted primarily to medical facilities and auxiliary uses, and is typically appropriate to compact areas around large hospitals."/14/ Permitted civic activities in the S-1 Zone include Health Care activities./11/

Zoning Regulations Section 2320 defines Health Care Civic Activities as:/15/

- "(a) Health clinics.
- "(b) Hospitals.
- "(c) Nursing homes, convalescent hospitals, rest homes, and homes for the aged with seven or more patients, or with mental, drug addict, or alcohol addict cases.
- "(d) Nonresidential centers providing psychological or family counseling and mental hygiene services to individuals or groups."

Thus, the proposed Ambulatory Services Center would be a permitted activity under the S-1 Zone designation.

Section 2211 of the Zoning Regulations defines accessory activities as deemed to include "such activities as are customarily associated with, and are appropriate, incidental, and subordinate to, such a principal activity...". Although generally required to be located on the same lot as the associated principal activity, certain accessory activities, including off-street parking and loading facilities may be located on a different lot from the principal activity. Zoning Section 2211(a) stipulates that where parking facilities are located on a different lot from principal activities, parking facilities must be reserved for use by persons directly participating in the principal activity./16/ The proposed project's 800-space parking facility would therefore be an accessory activity to the Children's Hospital Medical Center, with all parking spaces reserved for Hospital employees and visitors. The proposed Family Center expansion (and existing Family Center) may be defined as Semi-Transit Residential Activities under Zoning Regulations Section 2261:/17/

"Semi-Transient Residential Activities include the occupancy of living accommodations partly on a weekly or longer basis and partly for a shorter time period, but with less than 30 percent of the living units under the same ownership or management on the same lot being occupied on a less-than-weekly basis; but exclude institutional living arrangements involving the provision of a special kind of care or forced residence, such as in nursing homes, orphanages, asylums, and prisons . . ."

Zoning Regulations Section 6103(a) stipulates that Residential (including Semi-Transient) is a permitted activity in an S-1 Zone./11/ Open space is required for Residential Facilities in the S-1 Zone, (but is not required for non-residential facilities), in the amount of at least 75 square feet (of group open space) per rooming unit./18/

Any retail-type activity proposed on the ground floor of the Ambulatory Services Center would be considered an accessory activity as long as it is a support activity for the hospital, such as a pharmacy or campus security office. Other commercial activities may require a conditional use permit.

Development regulations under the S-1 Zone designation apply to lot size, development floor area ratio, building height, and outdoor yard and open spaces (see Table 2).

The minimum lot area is 4,000 sq. ft., with a minimum lot width of 25 feet along the street frontage. The maximum permitted floor-area ratio for the site is 4.0:1, which is substantially greater than the 0.58:1 floor-area ratio of the proposed project. The Zoning Regulations do not specify a maximum allowable height for the S-1 Zone designation in general, except on lots abutting Residential Zones./19/ The project site is adjacent to an R-40 Zone and an R-50 Zone on the west across Martin Luther King, Jr. Way, and an R-40 Zone on the north across 53rd Street. However, the lots which compose the project site are separated by street right-of-ways from lots within adjacent residential zones; therefore, the project under S-1 Zone designation for the site would not be subject to maximum height limitations except for exterior signage.

Minimum yard setback requirements which would apply to the project, under the S-1 Zone designation, are a front-yard depth of ten feet; a side-yard depth of ten feet (street-side); and a rear-yard depth of ten feet./20/ The proposed parking garage would be set back by about 30 feet, including sidewalk, from the property line along 53rd Street and about 40 feet from the property line at Dover Street. The Family Center expansion would be set back by at least 30 feet from the property line at 53rd Street and about 20 feet from the line property at Dover Street. The Ambulatory Services Center would be set back by about 30 ft. from the Dover Street property line.

TABLE 2: COMPARISON OF PROPOSED PROJECT TO ZONING REGULATIONS UNDER EXISTING AND PROPOSED ZONE DESIGNATIONS FOR THE SITE

	Proposed Project	Existing Zone Designations		Proposed Zone Designation
		R-40	R-50	S-1
Lot				
Size (Sq. Ft.)	177,000	min. 5,000	min. 4,000	min. 4,000
Width (Ft.)	520	min. 45	min. 25	min. 25
Yard Setback				
Front (Ft.)	30	min. 20	min. 15	min. 10
Side (Ft.)	20-40	min. 5	min. 4	min. 10
Rear (Ft.)	-	min. 15	min. 15	min. 10
Building				
Height (Ft.)/a/	-	max. 30	max. 30	n/a
Floor Area Ratio/b/	0.58:1	n/a	n/a	max. 4.00:1/c/
Open Space				
Group Usable (Sq. Ft.)	20,000	min. 300 per d.u.	min. 200 per d.u.	min. 75 sq. ft. /d,e/
Off-Street Parking (spaces)				
Ambulatory Services Center	/f/	88/g/	88/g/	88/g/
Parking Garage	800	-	-	-
Family Center Expansion	16	16.5/h/	16.5/h/	16.5/h/
Activities				
Residential (Permanent)	None	Permitted	Permitted	Permitted
Residential (Semi-Transient)	22,000 sq. ft.	Not Permitted	Not Permitted	Permitted
Civic (Health Care)	80,000 sq. ft.	Conditionally Permitted	Conditionally Permitted	Permitted

/a/ Under Zoning Regulations Section 7071(a) maximum height in R-40 and R-50 Zones for Civic Facilities may be up to 75 feet.

/b/ Under Zoning Regulations Section 2116 (c[1]), off-street parking facilities are excluded from Floor Area Ratio calculations. Thus, the FAR of the Ambulatory Services Center and Family Center Expansion would be about 0.58:1 over the new construction site.

/c/ Under Zoning Regulations Section 6117(a) the maximum permitted floor area ratio may be exceeded by ten percent.

/d/ Usable open space is required for residential facilities, but is not required for non-residential facilities, in an S-1 Zone, according to Zoning Regulations Section 6121.

/e/ Under Zoning Regulations Section 3871, Group Usable Open Space required is at least 75 square feet per rooming unit.

/f/ The proposed 800-space Parking Garage would provide parking space for the proposed Ambulatory Services Center and existing Hospital facilities, on a separate site than all of the facilities served, as allowed under Zoning Regulations Section 2211(a).

/g/ Under Zoning Regulations Section 7512(g), three spaces are required for each staff or regular visiting doctor, plus one space required for each two other employees.

/h/ Under Zoning Regulations Section 7511, the Family Center expansion would require one space for each two rooming units.

SOURCES: Oakland Zoning Regulations and Environmental Science Associates, Inc.

New development in Oakland is subject to requirements under Section 7110, General Buffering Requirements. In general, these requirements apply to open (unenclosed) off-street parking lots and loading areas, and stipulate landscaping standards for purposes of screening from adjacent lots and streets, and regulates artificial illumination of unenclosed parking and loading areas./21/ However, as all proposed off-street parking spaces with the Parking Garage project would be enclosed (except rooftop spaces), and no unenclosed freight-loading areas are proposed for the Ambulatory Services Center, the Buffering Requirements would be applicable only to the Family Center expansion project. The requirements for screening from abutting streets of the surface parking lot include, at a minimum height of 3½ feet, a solid wood or masonry wall or three-foot-wide landscaping hedge./21/

The project will be subject to S-1 Design Review Requirements. Section 9300 et. seq. of the Zoning Regulations specify the purpose and procedures involved in Design Review. The property owner (Children's Hospital) or authorized agent must file an application for Design Review with the City Planning Department; which will be reviewed by the Director of City Planning./22/ Zoning Regulations Section 9304 specifies the criteria under which design review approval may be granted:/23/

- "(a) That the proposal will help achieve or maintain a group of facilities which are well related one to another and which, taken together, result in well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered....
- "(b) That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of private and public investments in the area.
- "(c) That the proposed design conforms in all significant respects with any applicable district plan or development control map which has been adopted by the City Council."

The Planning Director will determine whether the proposed project conforms to the applicable design review criteria summarized above, and may approve or disapprove the proposed design. The Director's decision may be appealed to the City Planning Commission by the applicant or any other interested party.

As part of consideration of the appeal, the City Planning Commission would determine whether the proposed project conforms to applicable design review criteria, and may subsequently approve or disapprove the project proposal or require changes or reasonable conditions of approval as deemed necessary to ensure conformity of the project to the criteria./25/

Off-street parking requirements under the Zoning Regulations would be applicable to the proposed Ambulatory Services Center. As a Civic Activity, within an S-1 Zone, requirements for off-street parking spaces would be a minimum of three spaces for each staff or regular visiting doctor, plus one space for each two employees (other than doctors). Therefore, 30 spaces would be required for the ten physicians anticipated to be employed in the Ambulatory Services Center, plus 58 spaces required for the 115 non-physician employees of the project (for a total of 88 spaces required). Zoning regulations require one off-street parking space for each two "rooming units," within an S-1 Zone./24/ The Family Center expansion would provide 33 rooming units, and would include development of a 16-space surface parking lot adjacent to the existing Family Center building.

The proposed parking facility is intended to provide parking spaces to serve activities both within the proposed Ambulatory Services Center and the existing Hospital. Therefore, the hospital (as owners of the project site and existing Hospital site) may be required to meet the requirements of Zoning Regulations section 7536, which stipulate preparation of an agreement guaranteeing that such facilities (located on a separate lot from facilities served) will be maintained and reserved for the activity served./25/

Zoning Regulations Section 7548 regulates artificial illumination of off-street parking, loading and related access driveways in all R Zones and in S-1 and S-3 Zones./26/ Rooftop parking area with the proposed parking facility could be subject to these requirements, as would the surface parking lot adjacent to the Family Center.

MITIGATION MEASURES

The proposed project would continue the northward (across 52nd Street) expansion of hospital-related uses into a relatively low-density residential area, which was begun during the 1970s on the block bounded by Maring Luther King, Jr. Way, Dover Street, 52nd Street and 53rd Street. A total of 23 single-family residential structures would be removed from the site for project construction. This may be considered an unavoidable significant adverse effect which cannot be mitigated to a level of insignificance (see Chapter V). Following are measures either

proposed as part of the project or identified in this report that could reduce or eliminate additional potential environmental impacts of the proposed project related to land use, the Oakland Comprehensive Plan, and zoning regulations.

Proposed with the Project

- A landscaped buffer of trees and shrubs, at least 10 feet in width, would be provided at site frontages on Martin Luther King, Jr. Way, and 53rd Street, to minimize potential noise and visual impacts on these streets and on existing adjacent residential and commercial development.
- The proposed landscaped pedestrian atrium in the current 52nd Street right-of-way would provide open space accessible to residents and employees of the surrounding areas, as well as patients, visitors and employees of the Hospital.

In order to monitor the implementation of these mitigation measures, the City could consider inclusion of these measures in the project design as requirements for approval under S-1 Design Review.

Additional Measures Identified in This Report

- The fourth (rooftop) level of the parking garage could be surrounded by a trellis, to minimize potential impacts on adjacent residential development resulting from nighttime lighting of the parking area, and to soften the architectural appearance of the structure.
- To respond to the policies of the Comprehensive Plan Land Use, Housing and Policy Plan Elements regarding relocation rather than demolition of existing sound residential units, the 23 existing residential units on the project site could be relocated to vacant lots in flatland residential areas in the site vicinity if the units are determined to be in sound physical condition.

In order to ensure the relocation rather than the demolition of the existing housing units on the site, the City could require that Children's Hospital prepare a feasibility study identifying methods for moving housing units on to vacant flatland lots. The study could include an inventory of all vacant flatland lots in existing residential neighborhoods in North or West Oakland, and/or a documented advertising campaign in locally circulated newspapers offering the housing units free of charge, dependent upon their intact removal to vacant flatland lots in Oakland.

- The Hospital should ensure that tenants of residential units, to be relocated from the project site receive relocation assistance in securing housing in North Oakland.

The City could require that the Hospital document offers of relocation assistance to all tenants of housing units to be removed from the project site. Relocation assistance could be provided in the form of monetary compensation and/or assistance in locating comparable accommodations at an equivalent price.

NOTES - Land Use, Comprehensive Plan and Zoning

- /1/ City of Oakland Land Use - An Element of the Oakland Comprehensive Plan, Adopted by the Oakland City Council on April 29, 1980.
- /2/ City of Oakland, Housing - An Element of the Oakland Comprehensive Plan, Adopted by the Oakland City Council on March 4, 1986.
- /3/ City of Oakland Land Use Element, Appendix and Map 5.
- /4/ City of Oakland, Oakland Policy Plan - A Component of the Comprehensive Plan, Adopted by the Oakland City Council on October 24, 1972, and Amended through September, 1980.
- /5/ City of Oakland, Zoning Regulations, Ordinance No. 7248 C.M.S. As Amended; Adopted August 31, 1965; Revised through November 19, 1985. Section 3650.
- /6/ Ibid., Sections 3653 and 3654.
- /7/ Ibid., Sections 3664-3665 and 3669 - 3671.
- /8/ Ibid., Section 3600.
- /9/ Ibid., Sections 3603 and 3604.
- /10/ Ibid., Sections 3614-3615, and 3619-3621.
- /11/ Ibid., Sections 6103 and 6104.
- /12/ Ibid., Sections 4253 and 4254.
- /13/ Ibid., Sections 4453-4454, and 4503-4504.
- /14/ Ibid., Section 6100.
- /15/ Ibid., Section 2320.
- /16/ Ibid., Section 2211.
- /17/ Ibid., Section 2261.
- /18/ Ibid., Section 3871.

/19/ Ibid., Sections 6114, 6117, 6119, and 7070.

/20/ Ibid., Section 6120.

/21/ Ibid., Sections 7110, 7110(a) and 7110(b).

/22/ Ibid., Sections 9300, 9301(b) and 9303(a).

/23/ Ibid., Sections 9304 and 9305.

/24/ Ibid., Section 7511 and 7512(g).

/25/ Ibid., Section 7536.

/26/ Ibid., Section 7548.

B. URBAN DESIGN AND VISUAL QUALITY

SETTING

Long-Range Views

The topography of western Oakland, eastward from the shoreline of San Francisco Bay to about one mile east of the Children's Hospital Medical Center, rises gradually upward in elevation from essentially sea level to about 160 feet above mean sea level. Because of the general lack of topographic relief in this area, the visibility of individual or groups of structures from long-range viewpoints generally depends on the actual height of the structures.

The tallest structure on the existing campus of Children's Hospital is the five-story Nursing Tower structure (constructed in 1982) on the northwestern corner of the Hospital campus, fronting 52nd Street. It is visible from within about 0.5 miles of the site from viewpoints along the elevated Highway 24 and BART structures.

Short-Range Views

The visual character of the Children's Hospital campus vicinity is characterized by early 20th Century residential and commercial structures developed along the offset grid street pattern of the 19th Century, bisected by the freely curving elevated structures of Highway 24 and associated access ramps.

A majority of the buildings in the vicinity of the Hospital campus, with the visually prominent exception of most of buildings on the Hospital campus, date to the first two decades of the 20th Century. The buildings are almost all small-scale (one or two stories) with similar cornice lines, pitched roofs, overall massing and style. The residential buildings are uniformly set back from streetside property lines with landscaped yards. Typical for residential construction of this period, automobile garages are located at the rear of the lots, with long driveways to the street. Commercial structures along Martin Luther King, Jr. Way, in particular, and to a lesser extent along Shattuck and Telegraph Avenues, consist primarily of one-story buildings faced in brick, also constructed during the early 1900s (see Figures 11-15).



FIGURE 11
PHOTOGRAPH OF EXISTING HOSPITAL TOWER AND PROJECT SITE
LOOKING EASTWARD ALONG 52ND STREET



Source: Environmental Science Associates, Inc.

FIGURE 12
PHOTOGRAPH OF PROJECT SITE
LOOKING WESTWARD ALONG 52ND STREET



FIGURE 13
PHOTOGRAPH OF PROJECT SITE LOOKING NORTHWARD
ACROSS THE HOSPITAL SITE FROM MARTIN LUTHER KING, JR. WAY



FIGURE 14
PHOTOGRAPH OF PROJECT SITE
LOOKING WESTWARD ON 53RD STREET



FIGURE 15
PHOTOGRAPH OF PROJECT SITE
LOOKING SOUTHWARD ALONG DOVER STREET

To the east of the site, in the vicinity of the intersections of 52nd Street with Shattuck and Telegraph Avenues, many of the older residential and commercial structures constructed during early 1900s have been replaced during the last two decades with newer low-rise commercial structures characteristically surrounded by paved parking lots.

The relatively unified streetscape characteristic of residential streets in the site vicinity has been significantly altered in the last quarter century by construction of relatively large-scale structures. The most visually prominent feature of the site vicinity is the elevated Highway 24 structure immediately east of the project site, constructed in the 1960s and consequently visually disrupting the generally low-rise small-scale historic development pattern of the area. As a result of the Highway construction, a number of irregularly-shaped lots were left vacant. At present, some of the area's newer (generally 1960s and 1970s) construction occupies these lots, located south and east of the Children's Hospital campus, along the east side of Martin Luther King, Jr. Way, and between the west side of Highway 24 and Shattuck Avenue.

The elevated BART line immediately to the west of the project site also visually dominates the low-rise streetscape of the vicinity. Lying between the elevated BART line and the elevated Highway 24 structure, buildings of the Children's Hospital campus are also visually prominent from viewpoints within about two blocks of the site vicinity. The five-story Nursing Tower, at the southeast corner of the intersection of 52nd Street with Martin Luther King, Jr. Way, is the tallest occupied structure in the site vicinity and is visually prominent over the roofs of older one- and two-story development from viewpoints within about two blocks of the Hospital campus. It is the most visually prominent structure in the site vicinity, in terms of height and scale. The tower is also visually prominent because of its modern design relative to the small-scale bungalow style of architecture predominant of residential buildings surrounding the site.

The project site contains one-story residential structures constructed during the early decades of this century, in typical scale and architectural style of residences on blocks in the site vicinity. Mid-block on 52nd and 53rd Streets, the project site frontages are devoid of structures, and are visually characterized by open views of parking lots surrounded by chain-link fencing standing about six feet in height above ground level.

IMPACT

Long-Range Views

The proposed four-level (including rooftop) parking structure and five-story Ambulatory Services Center would be visually prominent to about the same extent as is the existing five-story structure on the campus' northwestern corner; that is, in viewpoints within about 0.5 miles of the site along the elevated Highway 24 and BART structures.

Details of exterior design treatment and detailing for the proposed structures have not been finalized; however, preliminary design indicates that the new Ambulatory Services structures would be comparable in shape, massing and exterior detailing to the existing tower on the northwestern corner of the campus and would therefore visually relate to the existing structure in views from more distant locations.

Short-Range Views

The proposed project developments would alter views from along surface streets within about two blocks of the site. The concentration of one-story residences on the eastern portion of the site (east of Dover Street), and a large expanse of paved and unpaved surface parking, would be replaced with relatively massive structures covering over about two-thirds of the site. Between and surrounding the new structures, open space areas with landscaping and decorative paving would replace existing landscaping immediately surrounding remaining residences on-site. Architectural treatment of outdoor open space areas with the proposed project has not been finalized as of this writing. However, it is expected, based on available preliminary site plans, that the largest new open space area created with the proposed project would be a landscaped pedestrian atrium along the existing 52nd Street right-of-way, between Dover Street and a proposed circular vehicle access drive at Martin Luther King, Jr. Way (see Figure 3 on pg 31). The perimeter of the circular access drive would also be landscaped with trees. Preliminary site plans also indicate provision of street trees along the 53rd Street frontage of the project site. Thus, the project would provide more landscaping compared to current conditions in views toward the site from viewpoints along 52nd and 53rd Streets from within about one block of the site.

The four-level parking garage would be approximately double the height (above ground level) of the existing single-family residential structures directly across 53rd Street from the site. The north wall of the parking garage would be set back by about 40 feet from the curbing along the south side of 53rd Street, which would be comparable to the prevailing front setbacks of the existing residences along the north side of 53rd Street.

The north wall of the parking garage would extend 450 feet in length along the 53rd Street property line. The street frontages of the existing single-family residential structures across 53rd Street from the site are approximately 25 to 30 feet in length, and are separated by 15- to 20-foot-wide yard areas. Thus, single plane surface of the garage, extending most of the length of the 53rd Street block between Dover Street and Martin Luther King, Jr. Way, would present a stark contrast with the physically separated and architecturally detailed individual facades of the residences on the opposite side of 53rd Street. Without mitigation, this would be a significant adverse impact on the visual quality of the residential neighborhood within two blocks north of the site.

The exterior design of the proposed Ambulatory Services Center would essentially repeat the exterior design of the existing Nursing Tower, adjacent to the south across 52nd Street (see Figures 16 to 18). In views toward the site looking eastward from Martin Luther King Jr. Way, the similarity in exterior design of the proposed Ambulatory Services Center and Nursing Tower would be emphasized by the covered pedestrian arcade, proposed to extend about 160 feet eastward along the former 52nd Street right-of-way from the proposed circular vehicle access drive.

The covered arcade structure would visually connect the proposed Center and the existing tower, and would provide visually unified appearance between the two buildings in views from along Martin Luther King Jr. Way. As with the existing Nursing Tower, however, the unembellished modern exterior design of the proposed Ambulatory Center would contrast with the small-scale bungalow style of architecture that is predominant in existing residential development surrounding the project site.

The exterior design of the parking garage would include several features intended by the project architects to reduce the appearance of bulk. Above the second and third levels would be a horizontal belt course, which would divide the facade into two horizontal sections. The facade of the garage structure would also incorporate design elements which would provide a vertical orientation to the facade, including pilasters and a punched design for ventilation grillwork at



FIGURE 16
PHOTOMONTAGE OF EXISTING HOSPITAL TOWER AND
PROPOSED PROJECT LOOKING EASTWARD ALONG 52ND STREET

Source: Douglas Symes and Environmental Science Associates, Inc.



FIGURE 17
PHOTOMONTAGE OF PROPOSED PROJECT
LOOKING WESTWARD ALONG 52ND STREET



FIGURE 18
PHOTOMONTAGE OF PROPOSED PROJECT LOOKING NORTHWARD
ACROSS THE HOSPITAL SITE FROM MARTIN LUTHER KING, JR. WAY

Source: Douglas Symes and Environmental Science Associates, Inc.

the first and second levels (see Figures 19 and 20). However, even with these design features, the 53rd Street facade of the parking garage would visually be a relatively unbroken exterior wall of four stories, and would be particularly prominent in views toward the site from residences on the north side of 53rd Street.

Operation of the proposed project would not increase, and could actually reduce, nighttime lighting in the area compared to existing conditions. Although nighttime operation of the Ambulatory Services Center and parking facility would result in some lighting of off-site areas immediately adjacent to the project site, the amount of off-site lighting from the project would probably be less than existing off-site lighting from parking areas on the site. Exterior lighting of access drives and the rooftop level of the parking facility would be subject to the requirements of Section 7548 of Zoning Regulations. These requirements include directing all lighting away from abutting lots./1/

The parking garage structure would add new shadow to the street and sidewalks of 53rd Street, adjacent to the site, during virtually all daylight hours of the year. As worst-case effects of shadow cast by the project, new shadow from the parking structure could reach across 53rd Street to the front yards of existing residences along the north side of the street between sunrise and about 10:00 a.m., and between about 3:00 p.m. and sunset, in late December.

Exterior design of project structures, orientation of structures, vehicular drives and pedestrian walkways would be subject to the City Design Review Procedure (Zoning Regulations Section 9300 et. seq.). In accordance with required Design Review procedures, the property owner (Children's Hospital) or authorized agent must file an application for Design Review with the City Planning Department, which will be reviewed by the Director of City Planning./2/ Zoning Regulations Section 9304 specifies the criteria under which design review approval may be granted:/3/

- "(a) That the proposal will help achieve or maintain a group of facilities which are well related one to another and which taken together, result in a well composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered. . . .
- "(b) That the proposed design will be of a quality and character which harmonizes with and serves to protect the value of private and public investments in the area.



FIGURE 19
PHOTOMONTAGE OF PROPOSED PROJECT
LOOKING WESTWARD ALONG 53RD STREET



FIGURE 20
PHOTOMONTAGE OF PROPOSED PROJECT
LOOKING SOUTHWARD ALONG DOVER STREET

- "(c) That the proposed design conforms in all significant respects with any applicable district plan or development control map which has been adopted by the City Council."

The Planning Director will determine whether the proposed project conforms to the applicable design review criteria summarized above and may approve or disapprove the proposed project. The Director's decision may be appealed to the City Planning Commission, and alternately the City Council.

MITIGATION MEASURES

The height and bulk of the proposed project structures would contrast with existing adjacent residential buildings. In particular, the length and relatively flat surface of the north wall of the parking garage would be in visual contrast to the building fronts and intervening side yards of existing residences across 53rd Street from the site. Following are measures either proposed as part of the project or identified in this report that could reduce or eliminate potential environmental impacts of the proposed project.

Proposed with the Project

- A landscaped buffer of trees would be provided at the perimeter of the project site, along site frontages at Martin Luther King, Jr. Way, 53rd Street, and Dover Street, to minimize potential impacts on adjacent streets and development resulting from increased visibility, and noise, and nighttime lighting with project operation. Landscaping would also be provided at the perimeter of access drives.
- A landscaped atrium providing pedestrian access would be provided along most of the former 52nd Street right-of-way between the proposed Ambulatory Services Center and the existing Hospital campus, in order to facilitate pedestrian access through the Hospital campus and to provide public open space for neighborhood residents, and Hospital employees and visitors.

Additional Measures Identified in this Report

- The fourth (rooftop) level of the parking garage could be surrounded by a trellis, to minimize potential impacts on adjacent residential development resulting from nighttime lighting of the parking area, and to soften the architectural appearance of the structure.
- Use light-colored, as opposed to white or darker-colored, stucco for facing buildings. Light-colored material would reduce the appearance of building mass compared to darker colors and would cause less glare from reflected light than would white material.
- Shield exterior lighting of all project buildings to contain light on-site. Avoid spotlighting building walls and landscaped areas. Shield and direct downward exterior lighting along pedestrian walkways and in parking areas to reduce light effects off site. Avoid use of wall-mounted or pole-mounted exterior lighting, and lighting placed along rooflines except at building entrances.

IV. Environmental Setting, Impacts and Mitigation Measures

- The exterior wall of the parking garage could be setback by at least eight feet above the second level, along the length of the structures frontage on 53rd Street, in order to reduce the appearance of bulk and to enhance the visual relationship between the height of the parking garage and height of the residential buildings along the north side of 53rd Street. The exterior setback would also reduce the extent of new shadow cast by the parking garage and could be sufficient to prevent new shadow from reaching the front yards of residences along the north side of 53rd Street.
- The exterior wall of the garage at 53rd Street could also be indented at regular intervals, corresponding to the fronts of existing residences across 53rd Street, to reduce the structures appearance of length along this block.

In order to monitor the implementation of these mitigation measures, the City could consider inclusion of these measures in the project design as requirements for project approval under S-1 Design Review. Project approval could be dependent upon implementation by the Hospital of any or all of these measures into project design.

NOTES - Urban Design and Visual Quality

- /1/ City of Oakland Zoning Regulations, Ordinance No. 7248 C.M.S. As Amended; Adopted August 31, 1965; Revised Through November 19, 1985. Section 7111(b).
- /2/ Ibid, Sections 9301(b) and 9303(a).
- /3/ Ibid, Section 9304.

C. TRANSPORTATION, CIRCULATION AND PARKING

SETTING

Circulation

Regional access to Children's Hospital is provided by State Route 24, Interstate 980 and Interstate 580 (see Figure 1 on page 28). Major streets include Martin Luther King, Jr. Way, 52nd Street, 55th Street, Market Street, Shattuck Avenue and Telegraph Avenue. Dover Street and 53rd Street provide local access in the project vicinity. Figure 21 illustrates the City Comprehensive Plan designations of arterial and collector streets in the area (Policy Plan Trafficways Map 6.)

Freeways

State Route 24 is an eight-lane freeway providing access to central Contra Costa County. Partial interchanges are located at Martin Luther King, Jr. Way near 47th Street, at 52nd Street, and at Telegraph Avenue. State Route 24 connects with Interstates 580 and 980 just south of Children's Hospital. State Route 24 currently carries about 115,000 vehicles per day in the project vicinity.^{/1/} Traffic conditions near the Hospital are somewhat congested during peak periods, although the most significant congestion occurs at the Caldecott Tunnel.^{/2/}

Interstate 980 is a continuation of State Route 24 which serves downtown Oakland and connects with the Nimitz Freeway (Interstate 880). The 980 freeway has four to eight lanes and carries about 54,000 vehicles a day south of Interstate 580.^{/1/} Traffic generally flows well, even during peak periods.^{/2/}

Interstate 580 is an eight-lane freeway which serves East Oakland and Hayward to the east and connects with Interstate 80 and the Bay Bridge to the west. Traffic volumes average about 190,000 daily vehicles on either side of State Route 24 and Interstate 980.^{/1/} Traffic conditions are most congested approaching Interstate 80 and the Bay Bridge during the morning peak period.^{/2/}



FIGURE 21
TRANSPORTATION STUDY AREA

Streets

Martin Luther King, Jr. Way is a six-lane arterial which carries about 42,000 vehicles per day near Children's Hospital.^{/3/} A pair of freeway ramps near 47th Street connect Martin Luther King, Jr. Way with State Route 24 to the south and with Interstate 580. Martin Luther King, Jr. Way also provides access to Berkeley to the north. Signalized intersections along Martin Luther King, Jr. Way are located at 45th Street, 47th Street, 52nd Street, and 55th Street.

Fifty-Second Street runs between Market Street and Shattuck Avenue. It is designated as an arterial street between Martin Luther King, Jr. Way and Telegraph Avenue, on the 1985 Trafficways Map of the Oakland Comprehensive Plan. To the west of Martin Luther King, Jr. Way, 52nd Street is a local street. It is a two-lane street adjacent to Children's Hospital, although it widens to four lanes east of State Route 24. East of Shattuck Avenue, 52nd Street continues as 51st Street, a four-lane arterial which connects to Telegraph Avenue and Piedmont. A pair of ramps on 52nd Street west of Shattuck Avenue provide access to and from State Route 24 to the south. The intersections of 52nd Street with Shattuck Avenue and 51st Street with Telegraph Avenue are signalized. The traffic volume on 52nd Street is about 8,700 daily vehicles between Martin Luther King, Jr. Way and State Route 24. Traffic volumes on 51st Street near Telegraph are about 21,800 daily vehicles.^{/3/}

Market Street is a four-lane arterial which runs between West Oakland and south Berkeley. The intersection of Market Street with 55th Street is signalized. Market Street carries about 12,200 daily vehicles.^{/3/}

Telegraph Avenue is a four-lane arterial which connects downtown Oakland with south Berkeley and the University of California. An on-ramp at 56th Street and an off-ramp at Aileen Street provide access to and from State Route 24 to the east. Nearby freeway ramps on Claremont Avenue provide access to and from westbound State Route 24. Signals are located at the intersections of Telegraph Avenue with 45th Street, with 51st Street, and with the State Route 24 freeway ramps. The daily traffic volume on Telegraph Avenue is about 18,200 vehicles.^{/3/}

Shattuck Avenue is a two-lane collector street which carries about 17,500 daily vehicles.^{/3/} Shattuck Avenue merges with Telegraph Avenue to the south, but to the north it eventually becomes a major arterial though downtown Berkeley.

Forty-Fifth Street and 55th Street are two-lane collector streets which provide through access across the State Route 24 freeway between Adeline Street and Telegraph Avenue, although 45th Street is designated as a local street west of Martin Luther King, Jr. Way. The daily traffic volume on 45th Street is about 2,700 vehicles, and the daily traffic volume on 55th Street is about 5,500 daily vehicles./3/

Dover Street and 53rd Street are two-lane local streets in the vicinity of Children's Hospital.

Existing Operations Conditions

Existing traffic operations were evaluated to determine if any improvements are necessary to accommodate existing conditions.

Caltrans traffic signal warrants were evaluated at unsignalized intersections./20/ The intersection of Telegraph Avenue and 55th Street meets the signal warrant based on peak-hour traffic volumes, and marginally meets one of the two signal warrants based on daily traffic volume. A traffic signal may be required at this location under existing traffic conditions. The intersection of the SR 24 off-ramp and 52nd Street also meets one of the two signal warrants based on traffic volume (assuming the off-ramp is the major street). A traffic signal does not appear to be required at this location due to the proximity of the signalized intersection at Shattuck Avenue and 52nd Street.

The intersection of Telegraph Avenue and 51st Street currently experiences congestion during the PM peak hour. The critical traffic movements at the intersection are the eastbound left turn from 51st Street to northbound Telegraph, and the westbound through vehicles on 51st Street.

Transit

Children's Hospital operates shuttle services to the Bay Area Rapid Transit (BART) stations and to off-site parking lots. Public transit service in the study area is provided by AC Transit and by BART. Figure 22 shows the transit lines in the project vicinity.

AC Transit

AC Transit provides bus service on several lines in the vicinity of Children's Hospital, including Line 15, Line 33, Line 65, Lines 40/43, Line 88 and the F Line./4/



FIGURE 22
EXISTING TRANSIT SERVICE IN THE
PROJECT SITE VICINITY

Line 15 operates along Martin Luther King, Jr. Way between downtown Berkeley and downtown Oakland, continuing on to east Oakland. Bus stops are located on the north side of 52nd Street. Line 15 operates from 5:00 AM to 2:00 AM, at frequencies of 6 to 10 minutes during commute periods, 15-minute midday frequencies and every 20 to 30 minutes after 6:00 PM.

Line 33 is an express line between downtown Berkeley and downtown Oakland via the State Route 24 freeway. It operates on Martin Luther King, Jr. Way adjacent to Children's Hospital, stopping north of 52nd Street. Line 33 operates every 16 to 18 minutes during commute periods only.

Line 65 is a local bus line serving Dwight Way in Berkeley, Claremont Avenue, 55th Street, Martin Luther King, Jr. Way, and 40th Street to San Pablo Avenue. It stops at Children's Hospital on Martin Luther King, Jr. Way north of 52nd Street, providing access to the Claremont Avenue area and connections to Transbay bus lines at the Yerba Buena/San Pablo transfer station. Line 65 operates every 20 minutes from 6:00 AM to 7:00 PM.

Line 43 operates along Shattuck Avenue and Telegraph Avenue between downtown Berkeley and downtown Oakland, continuing to Foothill Boulevard and east Oakland. The closest stop to Children's Hospital is at the intersection of 52nd Street and Shattuck Avenue. Line 43 operates between 4:00 AM and 1:30 AM at 10 minute frequencies during commute periods, 15-minute midday frequencies and 20 minute frequencies at night. Line 40 operates 24 hours a day along Telegraph Avenue and follows a similar route as Line 43 south of the Telegraph/Shattuck intersection.

Line 88 operates along Market Street, connecting central Berkeley with downtown Oakland and west Oakland. Line 88 stops on Market Street south of 53rd Street in the northbound direction and north of 52nd Street in the southbound direction. It operates from 5:00 AM to 12:00 Midnight at frequencies of 12 minutes during commute periods, 15 minutes during midday and 30 minutes at night.

The F Line provides transbay bus service between Berkeley and the Transbay Terminal in downtown San Francisco. It operates along Market Street in the vicinity of Children's Hospital. The F Line provides service between 5:00 AM and 2:00 AM at frequencies of 10 to 20 minutes during commute periods, 15 minutes during midday and 20 to 30 minutes at night.

BART

The Bay Area Rapid Transit District provides regional rail transit service to San Francisco, Alameda and Contra Costa Counties. The MacArthur BART station is located in the median of State Route 24 between 40th Street and MacArthur Boulevard. The station is approximately three-quarters of a mile from Children's Hospital, or about a 15 to 20 minute walk. AC Transit Lines 15 and 65 also connect Children's Hospital with the MacArthur BART station.

The MacArthur BART station is served by three BART lines (Concord-Daly City, Richmond-Fremont, and Richmond-Daly City), operating from 6:00 AM to 12:00 AM. All three lines serve downtown Oakland. The Concord-Daly City line provides service to Concord, Walnut Creek and San Francisco. It operates every 7.5 minutes during commute periods and every 15 to 20 minutes during midday and evening. The Richmond-Fremont line serves Berkeley, Oakland, Hayward and Fremont, operating every 15 minutes during commute hours and every 15 to 20 minutes during midday and evening. The Richmond-Daly City line serves Berkeley and San Francisco, operating every 20 minutes during commute hours and mid-day, with no service in the evening after 8:00 PM./5/

Parking

Parking for Children's Hospital visitors and employees is provided in a variety of off-street parking lots (see Figure 23). The total number of parking spaces available in these lots is 606 as shown in Table 3. Visitor parking is only allowed in the Visitor and Short Term Lots. Access to the Visitor Lot is from 52nd Street only and exits can only be made onto Martin Luther King, Jr. Way. Entry to the Visitor Lot is controlled by a mechanical gate which is opened by a security guard once visitors identify themselves through a microphone at the entrance to the parking lot. The West, North and American Lots contain 101, 89 and 104 parking stalls respectively for use by employees only. The 139 spaces available in the South Lot are also for employee parking only but the majority of stalls are reserved for doctors. The 37 spaces in the Gulf Lot are reserved for employees who work the second shift. Entry to the West, North, South, Gulf and American Lots is obtained only with a card key./6/

Children's Hospital employees and visitors also use metered and unmetered on-street parking. The majority of parking spaces are unrestricted except for the metered spaces directly in front of the Hospital on 52nd Street and some metered stalls on Martin Luther King, Jr. Way. The City of Oakland specified a survey area to define existing parking characteristics in the vicinity of Children's Hospital. Figure 24 shows the parking survey area and the total number of on-street



FIGURE 23
EXISTING OFF-STREET HOSPITAL PARKING FACILITIES

Source: DKS Associates

TABLE 3: EXISTING OFF-STREET PARKING CONDITIONS FOR HOSPITAL FACILITIES, 1987

<u>Off-Street Parking Lots</u>		<u>Occupied Parking Stalls</u>		
<u>Parking Area</u>	<u>Total No. of Parking Stalls</u>	<u>Mid-Morning (10:30-11:30)</u>	<u>Mid-Afternoon (2:30-3:30)</u>	<u>Evening (6:00-7:00)</u>
1. West Lot	101	101	94	11
2. Visitor Lot	128	85	109	69
3. North Lot	89	91	91	24
4. Short Term	8	8	8	6
5. South Lot	139	126	152	83
6. Gulf Lot	37	2	41	30
7. American Lot	<u>104</u>	<u>103</u>	<u>93</u>	<u>32</u>
TOTAL	606	516	588	255
Percent Occupied		85%	97%	42%

Source: American Medical Buildings and DKS Associates.

parking stalls on each block face surrounding Children's Hospital. The on-street parking area was surveyed during three time periods: mid-morning (10:30 AM to 11:30 AM), mid-afternoon (2:30 PM to 3:30 PM), and evening (6:00 PM to 7:00 PM) as shown in Table 4./7/ Parking occupancy in the off-street lots was also surveyed during these time periods (see Table 3).

The survey results showed that, during the mid-morning period, the employee parking lots (West, North, South and American) were approximately 97% occupied./8/ The unoccupied spaces (three percent) were generally reserved for doctors only. These figures do not include the Gulf Lot which is closed during the mid-morning period. The Visitor Lot was approximately 66% occupied in the mid-morning period./8/ The on-street spaces within the survey area (Figure 24) were 85% occupied in the mid-morning period. The on-street stalls immediately adjacent to the Hospital complex were generally 95% to 100% occupied, while the stalls further away from the Hospital were progressively less occupied. In locations on 52nd Street between

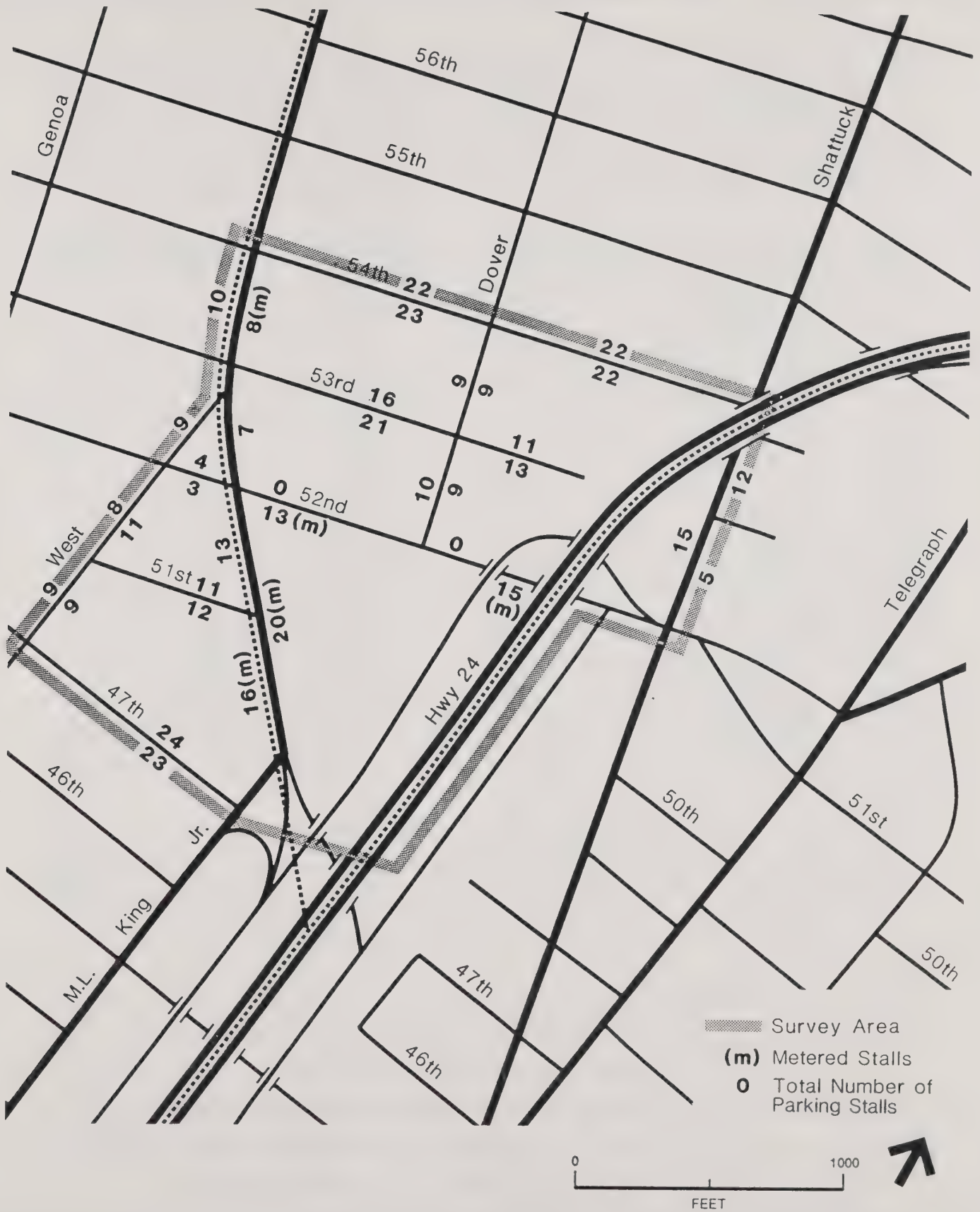


FIGURE 24
ON - STREET PARKING AREAS

TABLE 4: EXISTING ON-STREET PARKING CONDITIONS IN THE PROJECT SITE VICINITY

On-Street Parking Location			Occupied Parking Spaces		
Street	Block	Total No. of Parking Spaces	Mid-Morning (10:30-11:30)	Mid-Afternoon (2:30-3:30)	Evening (6:00-7:00)
47th	West-MLK	47	34	30	14
51st	West-MLK	23	24	24	12
52nd	West-MLK	7	8	8	4
52nd	MLK-Dover*	13	13	12	9
52nd	Dover-Shattuck*	15	12	12	2
53rd	MLK-Dover	37	37	36	6
53rd	Dover-Shattuck	24	24	24	13
54th	MLK-Dover	45	43	38	25
54th	Dover-Shattuck	44	35	25	21
West	47th-51st	18	17	12	9
West	51st-52nd	19	19	16	8
West	52nd-53rd	9	9	9	5
MLK	47th-51st*	16	5	2	1
MLK	47th-52nd*	20	19	15	12
MLK	51st-52nd	13	13	13	1
MLK	52nd-53rd	7	7	7	3
MLK	53rd-54th	10	9	8	3
MLK	53rd-54th*	8	4	3	3
Dover	52nd-53rd	19	20	20	11
Dover	53rd-54th	18	17	16	8
Shattuck	52nd-53rd	10	7	8	3
Shattuck	53rd-54th	22	3	5	4
TOTAL		444	379	343	177
Percent Occupied			85%	77%	40%

* Metered Parking

Source: DKS Associates.

West Street and Martin Luther King, Jr. Way, and on Dover Street between 52nd and 53rd Streets, an extra vehicle was able to park at curbside on-street parking area, increasing the number of parked vehicles to greater than the number of legal parking spaces./7/

In the mid-afternoon survey period, the employee parking lots (West, North, South, Gulf and American) were approximately 100% occupied. As Table 3 indicates, the West and American

Lots had a few available spaces, but the North Lot, South Lot and Gulf Lot contained vehicles parked in unmarked spaces which allowed the facilities to exceed their design capacities. The Visitor Lot was approximately 85% occupied in the mid-afternoon survey period./8/ The on-street stalls within the survey area were 77% occupied. As with the mid-morning period, the on-street stalls near the Hospital had a higher occupancy rate than the spaces further away./7/

The evening parking survey results showed the employee parking lots (West, North, South, Gulf and American) were 38% occupied. The Visitor Lot was 54% occupied. The Visitor Lot is opened up to employee parking around 4:00 PM, and therefore several of the vehicles in the lot during the evening period belong to employees./8/ The on-street spaces within the survey area were 40% occupied in the evening period./7/ Many of these vehicles were local residents rather than Children's Hospital related vehicles.

Pedestrians

There is a significant amount of pedestrian activity in the vicinity of Children's Hospital. Most of the parking areas for visitors and employees are located on different blocks from the main hospital facility, so most people have to cross 52nd Street and/or Martin Luther King, Jr. Way to reach their cars. There are also a number of outpatient services located in temporary facilities across 52nd Street from the main building. The combination of outpatient services and parking areas away from the main building tends to generate a large amount of pedestrian traffic, particularly across 52nd Street.

There are signalized crosswalks located across all four legs of the intersection of Martin Luther King, Jr. Way and 52nd Street. In addition, there is a marked crosswalk across 52nd Street mid-block between Martin Luther King, Jr. Way and Dover Street adjacent to the main entrance to the existing Children's Hospital building.

Pedestrian activity across 52nd Street was surveyed during the peak traffic periods. The survey results showed that during a one hour peak period (4:00 to 5:00 PM) approximately 160 pedestrians crossed 52nd Street in front of Children's Hospital. Only 34% of the pedestrians crossed 52nd Street in the mid-block crosswalk, while 66% of the pedestrians crossed in unmarked locations and were effectively jaywalking./9/

Pedestrian activity at the Martin Luther King, Jr. Way/52nd Street intersection was also surveyed during the morning and evening peak periods. During the AM peak hour, 74 pedestrians crossed Martin Luther King, Jr. Way and 47 pedestrians crossed 52nd Street. In the

PM peak hour, 94 pedestrians crossed Martin Luther King, Jr. Way and 58 pedestrians crossed 52nd Street./9/

Accident report records of the City of Oakland indicate that there have been two vehicle-pedestrian accidents adjacent to Childrens' Hospital during the past seven years. One of these accidents occurred as a pedestrian was crossing 52nd Street at Dover Street. The other accident occurred as a pedestrian was crossing Martin Luther King, Jr. Way at 52nd Street./10/

Bicycles

The City has designated 55th Street as a Recreational bicycle route, connecting Emeryville and the Rockridge area of Oakland. In addition, the East Bay Bicycle Coalitions' Bicycle Commute Map of the East Bay recommends West Street, 52nd Street and Dover Street as a bicycle commute route between downtown Oakland and downtown Berkeley. No counts of bicycle traffic in the site area have been made.

IMPACTS

The areawide traffic and circulation impacts of the proposed project would be of two types:

1) impacts resulting from increased travel demand associated with the proposed development of the Ambulatory Services Center and parking garage; and 2) impacts resulting from the proposed closure of 52nd Street between Martin Luther King, Jr. Way and Dover Street. The impacts of increased travel demand are discussed below, followed by a discussion of the impacts of street closure (beginning on page 106). The combined impacts of the proposed development of the Ambulatory Services Center and parking garage, and the proposed closure of 52nd Street, are discussed under Development Traffic Impacts (beginning on page 109). Alternatives to the closure of 52nd Street, and resulting impacts on areawide traffic and circulation, are discussed in Section X, Alternatives (beginning on page 181).

Travel Demand

Travel demand for the Children's Hospital project was evaluated by determining the net changes in land use and activity levels, applying appropriate traffic generation rates, and using travel survey data to determine the directions of travel. The cumulative impacts of proposed developments in the project vicinity were also analyzed.

Trip Generation

The Children's Hospital project would construct a new medical office building containing 80,000 gross square feet of floor area, a 22,000-square-foot addition to the Family Center, plus an 800-space parking garage. These uses would replace 27,000 square feet of existing temporary buildings, including 18,760 gross sq. ft. on the project site and 8,240 gross sq. ft. on the existing Hospital campus. About 230 parking spaces would also be displaced by the project, including 217 off-street spaces and 13 metered spaces on 52nd Street. Therefore, the project would provide net increases of 75,000 gross square feet of floor area (subtracting space on the project site and space on the existing Hospital campus containing activities to be relocated to the proposed project) and 570 additional parking spaces.

Children's Hospital provided a summary of current employment levels by employee types, employment shifts and visitor activity. This information was used in combination with traffic counts and field operations to estimate travel activity to and from the hospital during each hour of a typical weekday. The resultant daily and peak hour trips were compared to standard hospital traffic generation rates as reported in Trip Generation.¹¹ The existing Children's Hospital was found to generate traffic at very similar levels as the national averages for hospitals. Therefore, the ITE traffic generation rates were used to project future daily and peak-hour traffic at the hospital (see Table 5).

Trip Distribution

The directions of travel for Children's Hospital employees and visitors were estimated using the most recent available travel survey data, from the 1980 United States Census. The census identified residence and employment locations for a large sample of respondents. Information has since been compiled by the Metropolitan Transportation Commission (MTC) for the 550 Bay Area Traffic Analysis Zones. The distribution for all Children's Hospital travel was based on the residence locations for employees who work in the MTC zone which encompasses the hospital (see Table 5). To ensure consistency, the resulting travel distribution was compared to information provided by the hospital which described general residence locations for employees and visitors.

TABLE 5: PROJECT VEHICULAR TRIP GENERATION AND TRIP DISTRIBUTION

TRIP GENERATION

	<u>Daily</u>		<u>AM Peak</u>		<u>PM Peak</u>	
	<u>Rate</u>	<u>Trips</u>	<u>Rate</u>	<u>Trips</u>	<u>Rate</u>	<u>Trips</u>
Children's Hospital 75,000 sq. ft. increase	16.69*	1,251	1.21*	91	1.70*	127

TRIP DISTRIBUTION

<u>Direction of Travel</u>	<u>Percentage</u>
South on Market Street	3.4%
North on Market Street	3.3%
North on Martin Luther King, Jr. Way	3.1%
North on Telegraph Avenue	3.3%
East on State Route 24	16.4%
East on 51st Street	4.9%
South on Telegraph Avenue	6.6%
West on State Route 24/I-580/I-980	59.0%
TOTAL	100.0%

* Trips per 1,000 sq. ft. of floor area

Source: DKS Associates

Street Closure

The Children's Hospital proposal would close 52nd Street to through traffic between Martin Luther King, Jr. Way and Dover Street. Dover Street would also be closed off at 53rd Street.

The vacated section of 52nd Street would be converted to a pedestrian plaza to allow pedestrians to safely travel between buildings and parking areas at Children's Hospital. The City of Oakland Comprehensive Plan (1985 Trafficways Map) currently designates 52nd Street as an arterial street between Martin Luther King, Jr. Way and Telegraph Avenue. This section evaluates the impacts of the proposed street closure on existing traffic patterns. The street closure is evaluated independently of the evaluation of transportation impacts caused by new development on the Children's Hospital site, so that the impacts of each may be identified.

Existing Traffic Patterns

Twenty-four hour machine traffic counts and manual peak-period intersection traffic counts were conducted in the vicinity of the hospital. Additional field observations were used to identify the traffic patterns for vehicles on 52nd Street. These included counts of vehicles at the hospital parking lots, and observations of vehicles at various checkpoints. About 10,700 vehicles per day use 52nd Street between Dover Street and Martin Luther King, Jr. Way. About 3,800 vehicles (36% of the daily total) are hospital-related, while 6,900 vehicles (64% of the daily total) are through traffic.

Hospital Traffic. Figure 25 illustrates the patterns for hospital-related traffic on 52nd Street. These numbers do not represent all of the hospital traffic, just the hospital traffic which uses 52nd Street. There are several parking lots which have entrances or exits on Martin Luther King, Jr. Way. Vehicles using these entrances or exits may never use 52nd Street. Of the hospital traffic on 52nd Street, about 1,700 vehicles (45%) travel to and from the east and 2,100 vehicles (55%) use 52nd Street to and from the west.^{/3/} Most of the traffic to and from the east continues east on 51st Street to points in Oakland or Contra Costa County via State Route 24. The traffic to and from the west splits to various destinations, with the majority of the traffic using the State Route 24 on-ramp to Interstate 580, and Interstate 980.^{/2/}

Through Traffic. All traffic which does not travel to and from a hospital driveway is considered to be through traffic (see Figure 26). These are the vehicles which would no longer be able to use 52nd Street if the street is closed. The majority of the through vehicles on 52nd Street (4,090 vehicles or 60%) use 52nd Street to connect between 51st Street to the east and Martin Luther King, Jr. Way to the north. Other significant traffic flows include 1,130 vehicles (16%) between 52nd Street and West Street and 850 vehicles (12%) between 52nd Street and Market Street to the north.^{/2,3/}

Traffic Diversions

The closure of 52nd Street would not greatly affect hospital-related traffic, but would require through traffic to use alternative routes. For this discussion, through traffic is divided into three groups:

1. North Through Traffic
2. South Through Traffic
3. Local Through Traffic

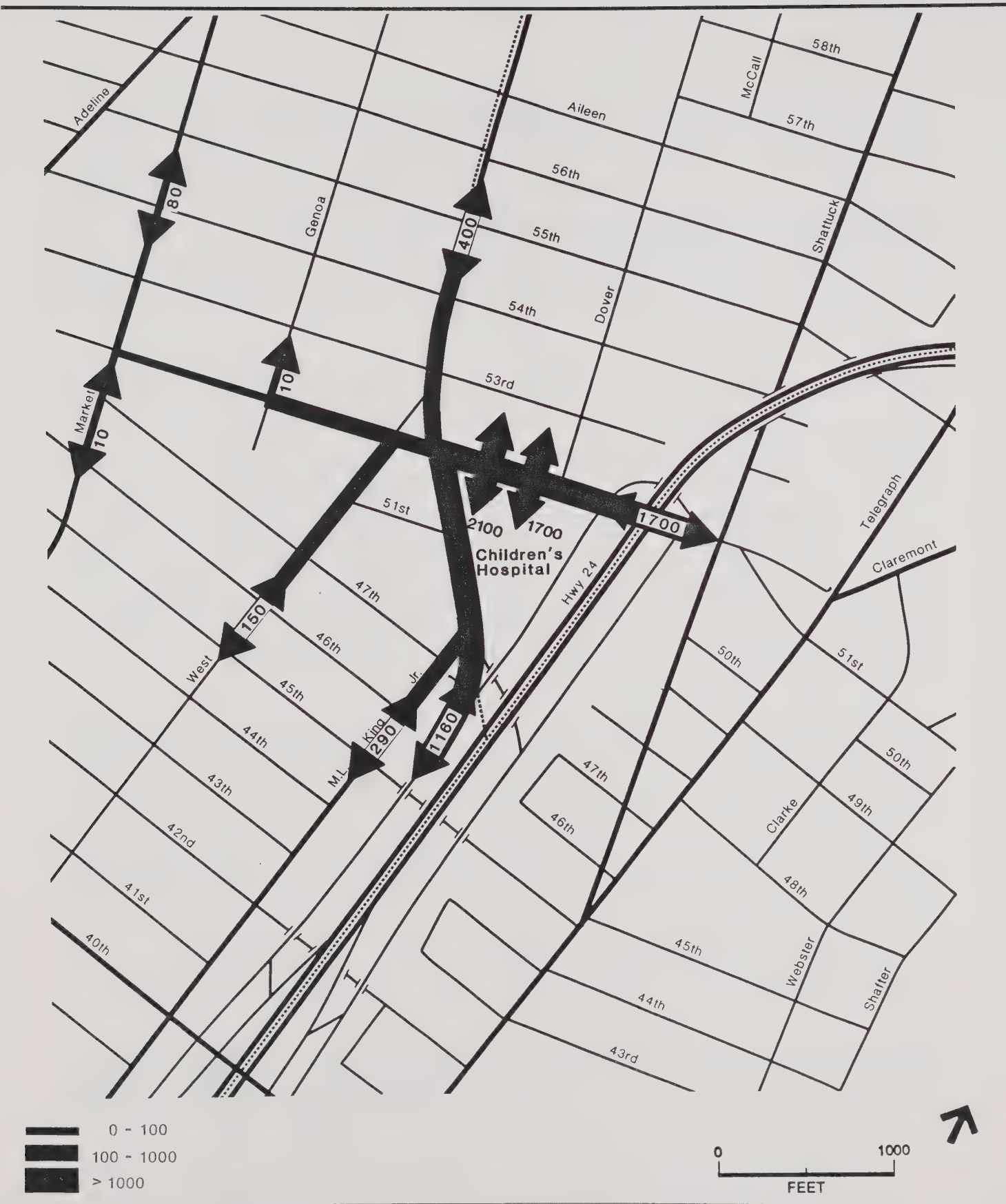


FIGURE 25
DAILY TWO WAY TRAFFIC FLOWS ON 52ND STREET
HOSPITAL TRAFFIC

Source: DKS Associates



FIGURE 26
DAILY TWO WAY TRAFFIC FLOWS ON 52ND STREET
THROUGH TRAFFIC (NON - HOSPITAL)

Source: DKS Associates

North Through Traffic. About three-quarters (about 5,200 vehicles) of the through traffic on 52nd Street travels to and from points along 55th Street or north of 55th Street. These vehicles currently use 52nd Street to connect with Martin Luther King, Jr. Way (4,090 vehicles), Market Street (850 vehicles) or Dover Street (270 vehicles).^{2,3/} All of these vehicles could divert to 55th Street to make the same trips. Shattuck Avenue would provide a connection between 51st Street and 55th Street, although some vehicles may use Telegraph Avenue. The traffic impact analysis assumes that all drivers would use Shattuck Avenue, in order to evaluate the most concentrated (worst-case) potential impacts. Although some drivers would have to make one or two additional turns using 55th Street (increasing travel time), no additional travel distance would be involved. The maximum additional travel time for these drivers is estimated to be 20 to 30 seconds.

South Through Traffic. About twenty percent (about 1,380 vehicles) of the through traffic on 52nd Street travels to and from points south of 45th Street. These vehicles currently use West Street (1,130 vehicles), Market Street (130 vehicles) or Martin Luther King, Jr. Way (120 vehicles).^{2,3/} These vehicles could divert to 45th Street to make the same trips, using Telegraph Avenue or Shattuck Avenue to connect between 51st Street and 45th Street. A slight additional travel distance would be involved, with additional travel time of 10 to 20 seconds due to added turns.

Local Through Traffic. About five percent (about 310 vehicles) of the traffic on 52nd Street travels to and from points in the immediate area of 52nd Street. These include 140 daily vehicles to and from the neighborhood just north of the hospital, 100 vehicles to and from the Genoa Street area, and 70 vehicles to and from the West Street area north of 45th Street.^{2,3/} With the closure of 52nd Street, these vehicles would have to use alternative routes such as 55th Street and 45th Street. This diversion would require some out-of-direction travel (about three to four blocks on the average), and would add about one minute to the travel time for most trips.

Street Closure Impacts

Besides traffic flow impacts, the proposed closure of 52nd Street would have potential impacts on emergency vehicles, future transit service and bicycle circulation.

Emergency Vehicles. The Oakland Fire Department operates a station on 51st Street east of Telegraph Avenue. Fire vehicles use 52nd Street to reach the neighborhoods north and west of Children's Hospital. The proposed closure of 52nd Street would require emergency vehicles to revise their routes to reach these areas. In particular, emergency vehicles would use either 45th Street, Shattuck Avenue/54th Street or 55th Street to cross under the SR 24 freeway. These alternate routes would add an average of one to two minutes to response times to the impacted neighborhoods./12/ Police and emergency vehicles traveling through the Hospital vicinity would also be required to travel around, rather than through the Hospital campus. Ambulance service to Children's Hospital would not be affected by the proposed street closure.

Transit. No AC Transit bus routes currently use 52nd Street, so existing bus service would not be impacted by the proposed street closure. Studies of AC Transit route restructuring are currently in process, as part of the AC Transit Comprehensive Service Plan. In these studies, 52nd Street has been considered as a potential corridor for future bus service. Bus service on 52nd Street would provide service between Children's Hospital and the Grand Avenue/Lakeshore area, as well as Emeryville. The proposed closure of 52nd Street would require revisions to these route restructuring proposals./13/

Bicycle Circulation. The bicycle commute route along West Street, 52nd and Dover Streets recommended by East Bay Bicycle Coalition would be blocked by the closure of 52nd Street. Bicyclists detouring one block on Martin Luther King, Jr. Way to 53rd Street would be required to make relatively difficult turning movements at the intersection of Martin Luther King, Jr. Way and 53rd Street. Bicycle travel on Martin Luther King, Jr. Way may be hazardous due to high traffic volumes, traffic exiting the Highway 24 freeway at high speed, narrow travel lanes and bus operations. The proposed closure of 52nd Street would also increase vehicle traffic on the City-designated bicycle route on 55th Street, potentially impacting the safety of bicycle travel on that route.

Intersection Operations

The traffic diversions caused by closure of 52nd Street would change patterns of vehicle flow through several street intersections. These changes in traffic flow would affect the operations at these intersections.

Impacts on intersection operations were determined by evaluation of levels of service at key intersections. Intersection service levels provide a consistent basis for evaluating the performance of a road system (see Table 6). A level of service "A", "B" or "C" indicates conditions where traffic can move freely. Levels of service "D" or "E" are progressively worse, similar to conditions in a busy downtown area. LOS "F" indicates a situation where the projected traffic volumes exceed the capacity of the intersection, resulting in long queues and delays for drivers. Level of Service "D" during peak hours is the generally accepted standard for planning of transportation facilities. Table 6 indicates the level of service criteria for signalized intersections, while Table 7 indicates the level of service criteria for unsignalized intersections.

The evaluation of intersection operations uses techniques described in the Highway Capacity Manual.¹⁴ Signalized intersections were evaluated using an operations analysis, which includes signal timing and pedestrian considerations. The ratio of traffic demand to capacity was calculated separately for each approach lane group at each signalized intersection. For this analysis, the level of service was based on the highest demand/capacity ratio at each intersection. Unsignalized intersections are those where the minor street has a stop sign while the major street travels freely (see Table 7). These intersections were evaluated by calculating delay on selected difficult movements, such as left turns out of the minor cross street.

Peak hour traffic volumes were counted at 14 key intersections as specified by the City of Oakland and indicated in Figure 27. Levels of Service and volume to capacity ratios were calculated for signalized intersections (Table 8) for existing traffic levels (Existing 52nd Open), and for estimated traffic volumes assuming closure of 52nd Street but no additional development at Children's Hospital (Existing 52nd Closed). Table 9 shows peak hour levels of service for the most difficult movements from the major (free flowing) street and minor (stop sign controlled) street approach with the highest delay at each unsignalized intersection. These tables also indicate the combined impacts of project-generated traffic and closure of 52nd Street, as discussed under Development Traffic Impacts beginning on page 109.

Diversions of traffic caused by the closure of 52nd Street would cause significant impacts at the intersections of Martin Luther King Jr. Way and 55th Street, Shattuck Avenue and 52nd Street, and Shattuck Avenue and 55th Street. These intersections would operate at unacceptable levels of service during the PM peak hour. Changes in intersection geometrics and signal operations would be required to provide acceptable traffic service at these intersections. Impacts on Shattuck Avenue would be reduced if some of the through-traffic northbound and southbound used Telegraph Avenue. Street closure would improve intersection operations at Martin Luther

TABLE 6: LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Stopped Delay (sec./veh.)	Volume to Capacity Ratio	Description of Traffic Conditions
A	≤5.0	0.00-0.59	Insignificant Delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.
B	5.1-15.0	0.60-0.69	Minimal Delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.
C	15.1-25.0	0.70-0.79	Acceptable Delays: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.
D	25.1-40.0	0.80-0.89	Tolerable Delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1-60.0	0.90-0.99	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long queues of vehicles form upstream.
F	≥60.0	n.a.	Excessive Delays: Conditions at capacity, with extremely long delays. Queues may block upstream intersections and do not dissipate.

Sources: Highway Capacity Manual, Transportation Research Board Special Report No. 209, Washington, D.C., 1985; DKS Associates.

King Jr. Way and 52nd Street and at Telegraph Avenue and 51st Street. Traffic would also be diverted from the unsignalized intersection of SR 24 off-ramp at 52nd Street, which would improve operating conditions at that location.

Summary of Street Closure Impacts

Dover Street. The Children's Hospital project would close Dover Street at 53rd Street. This additional street closure would be necessary with the closure of 52nd Street to ensure that through traffic doesn't divert onto 53rd Street. However, it would reduce accessibility to the neighborhood north of the hospital. Residents of this area would have to use Shattuck Avenue/54th Street or 55th Street to cross under the SR 24 freeway. Travel distances for certain trips would be increased by about two blocks, and travel time would increase by 10 to 20 seconds.

TABLE 7: LEVEL OF SERVICE INTERPRETATION FOR UNSIGNALIZED INTERSECTIONS

<u>Level of Service</u>	<u>Expected Delay</u>	<u>Reserve Capacity (Vehicles/Hour)</u>
A	Little or no delay	≥ 400
B	Short traffic delays	300-399
C	Average traffic delays	200-299
D	Long traffic delays	100-199
E	Very long traffic delays	0-99
F	Extreme delays potentially affecting other traffic movements in the intersection	≤ 0

Source: "Highway Capacity Manual," Special Report 209, Transportation Research Board, Washington, DC, 1985.

52nd Street. Closure of 52nd Street would require many drivers to change their current travel routes. Travel distances would not be increased for the majority of these drivers, but travel times may be increased because of additional turning movements and congestion at several intersections. About five percent of the through traffic on 52nd Street, or 400 daily vehicles, would have to travel about three to four blocks further as a result of the street closure. Emergency vehicles would have to revise routes to some neighborhoods, and average response times to these neighborhoods would be increased by about one to two minutes. Intersection mitigations would be required at three locations to provide acceptable traffic operations with the diversion caused by street closure.

Besides facilitating on-site Hospital pedestrian circulation, the primary benefit of street closure would be removing a major pedestrian-auto conflict which currently occurs on 52nd Street. Traffic would be moved from 52nd Street to 45th and 55th Streets, where pedestrian volumes are much lighter than they are in front of the hospital on 52nd Street.



FIGURE 27
STUDY INTERSECTIONS

TABLE 8: SIGNALIZED INTERSECTION OPERATIONS IN THE SITE VICINITY

<u>Level of Service and Demand/Capacity Ratio</u>				
AM PEAK HOUR				
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>Existing 52nd Closed</u>	<u>With Project 52nd Closed</u>	<u>Cumulative* 52nd Closed</u>
MLK/45th	A (.16)	A (.19)	A (.19)	A (.19)
MLK/47th	B (.68)	B (.68)	C (.73)	C (.74)
MLK/52nd	B (.69)	B (.66)	C (.71)	C (.71)
MLK/55th	A (.59)	C (.72)	C (.71)	E (.94)**
Shattuck/52nd	B (.68)	C (.71)	C (.71)	C (.73)
Shattuck/55th	A (.42)	B (.61)	B (.60)	B (.65)
Telegraph/45th	A (.39)	A (.38)	A (.38)	A (.46)
Telegraph/51st	C (.76)	C (.74)	C (.74)	C (.78)
PM PEAK HOUR				
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>Existing 52nd Closed</u>	<u>With Project 52nd Closed</u>	<u>Cumulative* 52nd Closed</u>
MLK/45th	A (.20)	A (.25)	A (.25)	A (.25)
MLK/47th	C (.74)	C (.74)	C (.76)	C (.77)
MLK/52nd	D (.89)	C (.74)	C (.76)	C (.77)
MLK/55th	D (.86)	F (>1.00)**	F (>1.00)**	F (>1.00)**
Shattuck/52nd	D (.87)	F (>1.00)**	F (>1.00)**	F (>1.00)**
Shattuck/55th	B (.67)	E (.96)**	E (.95)**	F (>1.00)**
Telegraph/45th	A (.49)	A (.51)	A (.51)	A (.58)
Telegraph/51st	E (.92)	D (.86)	D (.87)	E (.97)**

* Proposed Children's Hospital project plus cumulative projects listed in Table 11.

** Level of Service with existing signal operation. Recommended mitigations will improve level of service.

Note: See Table 19 on page 193, for evaluation of project buildings with 52nd Street Street Open.

Source: DKS Associates

Development Traffic Impacts

Traffic impacts were evaluated in terms of changes in traffic levels, and also in terms of changes in traffic operations. Daily traffic volumes indicate the average changes in traffic which would occur with development in the project vicinity. Peak hour intersection level of service analysis was used to determine the project impacts at intersections during the most critical times of day.

TABLE 9: UNSIGNALIZED INTERSECTION OPERATIONS IN THE SITE VICINITY

<u>Level of Service - Major Street/Minor Street*</u>				
AM PEAK HOUR				
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>Existing 52nd Closed</u>	<u>With Project 52nd Closed</u>	<u>Cumulative** 52nd Closed</u>
Market/52nd	A/A	A/A	A/A	A/A
Market/53rd	A/B	A/A	A/A	A/A
MLK/53rd	A/E	B/E	A/E	A/E
Dover/52nd	A/A	A/A	A/A	A/A
SR 24 offramp/52nd	***D	***C	***C	***C
Telegraph/55th	A/D	A/D	A/D	A/E
PM PEAK HOUR				
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>Existing 52nd Closed</u>	<u>With Project 52nd Closed</u>	<u>Cumulative** 52nd Closed</u>
Market/52nd	A/C	A/C	A/C	A/C
Market/53rd	A/C	A/C	A/C	A/C
MLK/53rd	A/E	A/E	A/E	A/E
Dover/52nd	A/A	A/A	A/A	A/A
SR 24 offramp/52nd	***E	***C	***D	***D
Telegraph/55th	A/F	A/F	A/F	A/F

* Level of Service for most difficult left turn movement from major street/
Level of Service for minor street approach with highest delay.

** Proposed Children's Hospital project plus cumulative projects listed in Table 11.

*** No left turn allowed from major street (52nd).

Note: See Table 20 on page 194, for evaluation of project buildings with 52nd Street Street Open.

SOURCE: DKS Associates

Daily Traffic Volumes

Future development at Children's Hospital together with the proposed closure of 52nd Street would increase traffic volumes on some streets serving the study area and decrease traffic volumes on other streets (see Figure 28). The most significant increase would occur on 55th Street between Shattuck Avenue and Martin Luther King, Jr. Way which would experience an



FIGURE 28
DAILY TRAFFIC VOLUMES WITH AND
WITHOUT PROJECT OPERATION

approximate 84% increase in traffic flows, from 5,500 to 10,100 daily vehicles. An increase in traffic volume of about 74%, from 2,700 to 4,700 daily vehicles, would occur on 45th Street between Martin Luther King, Jr. Way and Shattuck Avenue. On Shattuck Avenue between 52nd Street and 55th Street, traffic volumes would increase from 17,500 to 23,400 daily vehicles, an increase of about 34%. The increase in traffic volumes on 45th Street, 55th Street, and Shattuck Avenue would be due almost exclusively to the closure of 52nd Street.

Forty-fifth Street and 55th Street are collector streets which are primarily residential. Studies of residential streets have found that the maximum levels of traffic which residents consider "acceptable" vary from about 2,000 to 4,000 vehicles per day.^{21/} Projected traffic increases on 45th Street would change the character of the street from acceptable levels of traffic for residents to somewhat undesirable levels, although traffic levels would still be well within the capacity of a collector street (about 10,000 daily vehicles). Traffic on 55th Street already exceeds desirable levels for residential streets. Maximum potential traffic diversions from 52nd Street would cause traffic levels on 55th Street to reach maximum capacity of a collector street. The changes in traffic volumes on 45th Street and 55th Street would tend to increase street noise and reduce safety for residents on the affected street sections.

Traffic flows on 52nd Street near Dover would decrease by about 53%, from 8,700 to 4,100 daily vehicles. On Martin Luther King, Jr. Way between 52nd Street and 55th Street, traffic volumes would decrease approximately eight percent, from 42,000 to about 38,600 daily vehicles.

Intersection Operations

Impacts on intersection operations were determined by adding traffic generated by the project to existing traffic levels and calculating intersection levels of service (see With Project 52nd Closed in Tables 8 and 9). The analysis assumes the closure of 52nd Street as proposed.

Additional traffic from the hospital project would not cause significant changes in traffic operations at most locations, compared to existing traffic levels with 52nd Street closed. There would be changes in level of service from "B" to "C" at the intersections of Martin Luther King, Jr. Way with 47th, 52nd and 55th Streets during the AM peak hour. Operations would improve slightly at some intersections due to the redistribution of traffic to the proposed on-site parking garage.

In the above analysis, Shattuck Avenue was identified as the most likely alternative route for traffic diverted from 52nd Street and Martin Luther King, Jr. Way north of 52nd Street.

However, Telegraph Avenue would also be a potential alternative route, although somewhat longer in distance. If diverted traffic uses Telegraph Avenue instead of Shattuck Avenue, the need for improvements on Shattuck Avenue at 52nd Street and 55th Street would be reduced. However, the following changes in traffic control on Telegraph Avenue could be considered.

- Telegraph Avenue and 55th Street. If a significant portion (50% or more) of the current through traffic on 52nd Street to and from areas north of 55th Street used Telegraph Avenue instead of Shattuck Avenue as an alternate route, traffic volumes at the intersection of Telegraph Avenue and 55th Street would meet both of the signal warrants based on daily volume. Under these conditions, the installation of a signal at this intersection would be a higher priority than is warranted by existing conditions. If, however, a significant portion of through traffic on 52nd Street used Shattuck Avenue, the need for improvements on Telegraph Avenue would be reduced.
- Telegraph Avenue and 51st Street. Additional traffic diversion to Telegraph Avenue would reduce green time requirements for through traffic on 51st Street, and increase green time requirements for southbound left turn from Telegraph Avenue. Protected left turn signal phases would be recommended on Telegraph Avenue.

Freeway Ramps

The Children's Hospital project would add about 200 daily vehicles to State Route 24 (SR 24) east of the project, about 260 daily vehicles to I-580 west of SR 24, and about 260 daily vehicles to I-580 east of SR 24. These added traffic volumes would represent less than one-half of one percent in daily traffic volumes on each of the freeways. Thus, the project would not have a significant impact on levels of service or operating conditions on any one of the freeways. The Children's Hospital project would add traffic to the freeway ramps which serve the project (see Table 10). The project would increase volumes on the SR 24 freeway ramps to and from Martin Luther King, Jr. Way by one to six percent. Some traffic would be diverted away from the freeway ramps to and from 52nd Street due to the relocation of hospital parking to the proposed garage. The resulting total ramp volumes would be within the capacity of the existing freeway ramps. Ramp operations were also evaluated on the basis of intersection operations at the ramp termini. The intersection of Martin Luther King, Jr. Way and 47th Street would continue to operate at acceptable levels of service under all scenarios, as shown in Table 8. Operations at the intersection of SR 24 off-ramp with 52nd Street would improve slightly due to traffic

TABLE 10: HIGHWAY 24 FREEWAY RAMP VOLUMES

AM PEAK HOUR

<u>Ramp</u>	<u>Existing 52nd Open</u>	<u>With Project 52nd Closed</u>	<u>Cumulative* 52nd Closed</u>
52nd/SR24 WB On-ramp	850	850	870
52nd/SR24 EB Off-ramp	820	780	800
MLK/SR24 WB On-ramp	1,620	1,650	1,670
MLK/SR24 EB Off-ramp	1,300	1,380	1,410

PM PEAK HOUR

<u>Ramp</u>	<u>Existing 52nd Open</u>	<u>With Project 52nd Closed</u>	<u>Cumulative* 52nd Closed</u>
52nd/SR24 WB On-ramp	1,100	1,070	1,160
52nd/SR24 EB Off-ramp	770	760	810
MLK/SR24 WB On-ramp	1,920	2,000	2,040
MLK/SR24 EB Off-ramp	1,400	1,440	1,460

* Proposed Children's Hospital project plus cumulative development listed in Table 11.

SOURCE: DKS Associates

diversions caused by street closure and hospital parking relocation. However, vehicle queues on eastbound 52nd Street at Shattuck Avenue would continue to conflict with freeway off-ramp traffic, as in existing conditions.

Transit

Children's Hospital employee surveys and census data indicate that about 15% use transit. Two-thirds of the transit riders use AC Transit while one-third of the transit riders use BART/8/. Assuming that about 15 percent of Hospital visitors would use transit, the proposed development at Children's Hospital would add about 220 daily transit passengers, with 150 using AC Transit while 70 would use BART.

The project would add ten to 15 passengers to AC Transit buses during peak hours. The majority of these passengers would use the 15 Line (60%), with other passengers using the 33 Line, the 43 Line and the 65 Line. About five to ten passengers would be added to BART during peak hours. These passengers would be spread out among the Concord, Richmond, Daly City and Fremont lines.

The numbers of additional transit passengers on each transit line during peak periods would not have significant impacts on transit loadings, and would not require additional runs or reallocations of existing drivers and vehicles.

Parking

The Children's Hospital project would significantly change parking locations for employees and visitors. The proposed 800 space parking garage would replace 217 existing surface parking spaces, providing a net increase of 583 off-street parking spaces. The total supply of off-street parking spaces, including off-site lots operated by the hospital, would increase from 606 spaces to 1,189 spaces. The proposed closure of 52nd Street would remove 13 metered parking spaces. The project would therefore result in a net increase in the total parking supply of 570 spaces.

Existing parking demand at Children's Hospital was estimated using information on average employee and visitor activity. The maximum parking demand, which occurs between 2:30 and 3:30 PM, was estimated to be 1,150 vehicles including about 130 visitor vehicles and 1,020 employee vehicles.^{6,8/} During this peak period, 590 vehicles park in off-street lots while up to 560 vehicles park in on-street spaces. Some of the vehicles parking on-street park in spaces outside of the survey area boundaries (shown in Figure 24).

Future parking demand was estimated by factoring the existing parking demand at Children's Hospital by the increase in hospital building area. The project would increase building area by 24%, so it is estimated that peak period parking demand would increase from 1,150 vehicles to 1,430 vehicles. With the estimated future parking demand of 1,430 vehicles, 1,189 vehicles would be able to park in off-street lots and 241 vehicles would park in on-street parking spaces. Except for several metered parking spaces adjacent to the hospital, all on-street parking spaces in the survey area would be occupied by Hospital employee vehicles. Therefore, the project would decrease the number of vehicles in on-street parking spaces by about 320. Parking impacts on the surrounding neighborhood would be significantly decreased but up to 240 vehicles would still park on-street in the surrounding area during peak periods.

Pedestrians

The Children's Hospital project would significantly increase the amount of pedestrian activity across the 52nd Street corridor. The number of parking spaces in the block bounded by Martin Luther King, Jr. Way, Dover Street, and 52nd and 53rd Streets, would increase 3.5 times, while

the amount of building area would increase by three times. Future pedestrian activity across 52nd Street is estimated to be increased from 220 persons to about 620 persons during peak hours.

This amount of future pedestrian activity would significantly increase pedestrian-vehicle conflicts if 52nd Street were to remain open to traffic, and pedestrians were to continue to cross the street at-grade. The proposed plan, however, would close 52nd Street to through vehicle traffic and provide an exclusive pedestrian plaza for travel between the two main structures and the parking garage.

By providing a higher proportion of parking spaces in the on-site parking garage, the project would reduce the number of Children's Hospital pedestrians who cross Martin Luther King, Jr. Way. Employees who park in the West Lot would still cross Martin Luther King, Jr. Way to reach their vehicles.

Cumulative Impacts

The impacts of the Children's Hospital project were evaluated in conjunction with other proposed developments in the project vicinity. The planning departments of the cities of Berkeley and Oakland were asked to identify projects which could potentially introduce transportation impacts in the Children's Hospital study area (see Figure 29 and Table 11).^{15,16/} The cumulative development analysis includes a potential future inpatient building on the existing campus of Children's Hospital which is not part of the proposed project; development of the MacArthur BART Station site, based on existing zoning and adjacent land uses (no specific development projects have been proposed for this site); the proposed Martin Luther King, Jr. Plaza project; a proposed shopping center at 51st Street and Telegraph Avenue; and a proposed medical office building at Kaiser Hospital.^{17/} Proposed development at the Rockridge BART station was also considered. Major travel routes to and from the Rockridge BART station site would include College Avenue, Broadway, and the State Route 24 interchanges at Broadway, and Claremont/Telegraph Avenues. Therefore, it was determined that additional traffic to and from that site would not significantly impact the Children's Hospital study area streets and intersections.

Traffic generation of the proposed land uses was estimated based on standard traffic generation rates.^{11/} Because the proposed land uses for the Martin Luther King Plaza and Telegraph Avenue/51st Street projects would include locally-oriented retail, the traffic distribution shown in Table 5 was adjusted based on population in the immediately surrounding area. The resulting



TABLE 11: CUMULATIVE VEHICLE TRIP GENERATION

	Daily		AM Peak		PM Peak	
	Rate*	Trips	Rate*	Trips	Rate*	Trips
Childrens' Hospital 60,000sf Future Inpatient Tower	16.69	1,000	1.21	73	1.70	102
MLK Plaza						
120,800sf Retail	55.77	6,737	1.62	195	5.71	685
40,000sf Office	19.40	776	2.28	91	2.30	92
6,000sf Day Care	67.00	402	11.36	68	12.30	74
8,000sf Senior Center	45.50	364	1.10	9	4.91	39
40 Duplex Units	5.86	234	0.88	35	1.43	57
Subtotal	-	8,513	-	398	-	947
Telegraph/51st						
34,170sf Retail	81.15	2,772	2.01	69	7.82	267
4,200sf Post Office	86.70	364	5.30	22	6.7	28
17,000sf Underground Postal Facility	4.89	84	0.57	10	1.56	27
Subtotal	-	3,220	-	101	-	322
Kaiser Medical Center 75 emp.** Hospital	5.892	442	1.12	84	1.12	84
McArthur BART Station						
290 Apartment Units	6.595	1,913	.52	151	.628	182
100,000 sf Med. Office	34.17	3,417	1.63	163	3.63	363
Subtotal	-	5,772	-	398	-	629
TOTAL		18,947		1,054		2,084

* Trips per 1,000 sq. ft. of floor area or trips per residential unit

** Trips per employee.

SOURCE: DKS Associates

traffic generation and traffic distribution was used to assign traffic to the street system. The traffic volumes generated by cumulative traffic were added to the traffic volumes estimated with the Children's Hospital project and the 52nd Street closure.

Intersection operations were evaluated with the Children's Hospital project plus cumulative development (see Cumulative 52nd Street Closed in Tables 8 and 9). Cumulative development would cause level of service changes from existing-plus-project conditions at the intersections of Martin Luther King, Jr. Way with 55th Street in the AM peak hour, and at the intersection of Telegraph Avenue with 51st Street and Shattuck Avenue at 55th Street during the PM peak hour. Traffic from cumulative development would also increase delays at the unsignalized intersection of Telegraph Avenue and 55th Street, during the AM peak hours.

Evaluation of Site Plan

The existing Children's Hospital campus features buildings and parking lots in a variety of locations (see Figure 2 on p. 29 and Figure 23 on p. 92). As a result, there are several vehicular entry and exit points, and pedestrians often have to cross 52nd Street and several parking lots or parking lot driveways in order to reach their destinations.

The proposed plan would improve pedestrian safety by closing 52nd Street to through vehicular traffic between Martin Luther King, Jr. Way and Dover Street (see Figure 3 on p. 31). The proposed site plan would also concentrate parking in an on-site 800 space parking garage. Specific impacts of the closure of 52nd Street are discussed separately. This evaluation of the on-site transportation operations of the Children's Hospital project is based on the schematic site plan prepared by The Ratcliff Architects.

Vehicle Access

The primary vehicle access to the Children's Hospital Medical Center would be from Martin Luther King, Jr. Way, in the same location as the existing intersection with 52nd Street. This driveway would provide access to the main passenger loading area, and also to the proposed parking garage. A second access to the garage and a smaller passenger loading area would be provided at Dover Street on the east side of the project. The number of vehicles using each garage entrance was estimated based on projected traffic distribution for hospital traffic, and reallocation of existing traffic from off-site parking areas to the proposed garage.

The project entrance on Martin Luther King, Jr. Way would retain the existing traffic signal. About 70% of the hospital traffic would be expected to use this entrance, resulting in traffic volumes of about 4,000 daily vehicles or 300 to 400 vehicles during peak hours. This traffic volume would be 46% lower than existing 52nd Street traffic volumes at the intersection.

A detailed operational analysis of the traffic signal at Martin Luther King, Jr. Way and the project entrance was conducted. The existing left turn arrow for traffic turning from southbound Martin Luther King, Jr. Way would no longer be justified under the proposed Children's Hospital plan based on traffic volume and signal operation considerations. However, the left-turn phase should be retained for safety reasons, because the columns supporting BART tracks restrict visibility of oncoming traffic on Martin Luther King, Jr. Way.

Potential queuing at the Martin Luther King, Jr. Way exit from Children's Hospital was also evaluated. The average queue length during the PM peak hour would be five vehicles, with maximum queues (no more than ten percent of the time) of eight vehicles. The average queue would extend 100 feet back from the traffic signal while the maximum queue would extend back 160 feet.^{18/} The current site plan indicates a distance of 70 feet between Martin Luther King Jr. Way and the passenger pick-up/drop-off turnaround, and 220 feet of distance back to the parking garage exit. Queuing from the signalized exit would typically back up onto the turnaround during peak hours. Maximum queues could conflict with movements on the turnaround and the garage exit driveway. It is recommended that the hospital driveway to Martin Luther King Jr. Way provide two exit lanes and one entrance lane, with a minimum curb-to-curb width of 40 feet.

There are two alternatives for operation of the hospital entrance driveway and auto turnaround. The turnaround could operate as a one-way counter-clockwise loop. This pattern would minimize conflicts from turning vehicles, but would require all vehicles entering the parking garage to pass by the drop-off area. The drop-off area would provide adequate roadway width to allow stopped vehicles to pull out of the moving lane (32 feet total width). However, there is a potential for vehicles to overflow the drop-off area and block vehicles trying to reach the garage.

A second alternative for operation of the auto turnaround would reorient the entrance so that the major route would be a two-way driveway directly between Martin Luther King, Jr. Way and the parking garage. The pick-up/drop-off area would be a turnout from this main driveway. This pattern would allow vehicles entering the parking garage to bypass the drop-off area. There would be potential conflicts where vehicles leaving the drop-off area wish to turn left towards Martin Luther King, Jr. Way, and also where vehicles exiting the parking garage wish to turn left to the drop-off area. Traffic control devices would be recommended to provide "stop" or "yield" control for left-turning vehicles at these locations. In addition, two-way operation would require a minimum roadway width of 36 feet.

Parking Garage Operations

The existing surface parking lots on the block bounded by Martin Luther King, Jr. Way, Dover Street, 52nd and 53rd Streets provide parking for 217 vehicles. The Children's Hospital project would replace these parking lots with an 800-space garage located towards the north side of the site.

The garage would allow a greater percentage of hospital employees and visitors to park immediately adjacent to the hospital buildings. As a result, more vehicle activity would be concentrated on-site rather than spread throughout the surrounding area.

The parking garage would have two access points. The west entrance would lead to a driveway connecting to Martin Luther King, Jr. Way opposite 52nd Street. The east entrance would connect to Dover Street between 52nd and 53rd Streets. Based on the projected directional distribution of trips to and from the hospital, it is estimated that 70% of the garage traffic would use the west entrance while 30% would use the east entrance.

Entrance and exit operations were evaluated at each of the parking garage access points. The peak inbound flows during the AM peak hour would be about 160 vehicles at the west entrance and 65 vehicles at the east entrance. The west entrance would require two entry lanes and stacking space for up to two total vehicles (one per lane). The driveway shown on the current site plan would provide sufficient space for this activity. The east entrance would require one in-bound lane and stacking space for two vehicles. The gates on the east entry should be set back 50 feet from Dover Street to prevent stacking from occurring on Dover Street./19/

The peak outbound flows during the PM peak hour would be about 200 vehicles at the west exit and 80 vehicles at the east exit. The west exit would require two lanes and stacking space for up to three total vehicles behind (up to two per lane) the exit gate. This operation could be facilitated by providing three total lanes: one inbound, one outbound and one reversible lane in the center. The east exit would require one outbound lane and stacking space for up to two vehicles behind the exit gate./19/

Service Vehicle Access

The proposed site plan for Children's Hospital would maintain the existing service areas. The main service area is located on a driveway off Martin Luther King, Jr. Way on the west side of the existing buildings. A second service area for the research laboratory is located on the south side of the hospital site, accessed via the former Dover Street right-of-way south of 52nd Street.

Service access for the new medical office building would be located on Dover Street between 52nd Street and the east parking garage entrance. The preliminary site plan does not identify a specific location or configuration for this loading area. It is recommended that the driveway to the loading area be located at least 50 feet from the parking garage driveway to minimize conflicts between trucks and cars. If possible, the loading area should provide space for trucks to turn around within the loading area. This would prevent trucks from backing into Dover Street where they would potentially conflict with vehicles exiting the parking garage.

Pedestrian Circulation

The proposed site plan would greatly improve pedestrian circulation at Children's Hospital. Pedestrians currently have to cross 52nd Street to travel between the hospital buildings and the visitor parking areas. There are marked crosswalks at Martin Luther King, Jr. Way and mid-block near the main entrance to the hospital. However, many pedestrians use more direct paths and cross 52nd Street at unmarked locations. This pattern is hazardous, as drivers on 52nd Street do not always know where to watch for pedestrians.

The proposed site plan would create a pedestrian plaza on the current 52nd Street right-of-way adjacent to the existing building and the proposed medical office building. The pedestrian plaza would create direct paths between the two buildings, and also between the buildings and the proposed parking garage. Pedestrians would be able to move between their parked vehicles and all of the hospital facilities without crossing any vehicle traffic. This would greatly improve safety for both pedestrians and motorists.

Passenger Loading

The proposed site plan would provide two areas for passenger drop-off and loading. The main drop-off area would be along the circular auto turnaround connected to the Martin Luther King, Jr. Way entrance driveway. A second drop-off area would be provided on the east side of the site at the intersection of 52nd Street and Dover Street.

Issues relating to vehicle circulation on the proposed circular turnaround are discussed above as part of the evaluation of vehicle access. The drop-off area would provide adequate width (32 feet total roadway width including 10 feet of parking lane) to allow drivers to maneuver past parked vehicles. Turning radii would also be adequate for all cars and small trucks. The drop-off area as shown would accommodate about three to four parked vehicles. This space would be able to handle passenger loading activity peak hours.

Initial Development Phase

An initial phase of development has been proposed for the Children's Hospital project. The initial phase would develop a parking garage with 600 out of the full 800 parking spaces, but would not develop additional buildings. Fifty-Second Street would remain open. This initial phase would not increase traffic volumes related to the hospital, but would relocate traffic activity from various off-site located to the proposed parking garage. Off-site traffic and parking impacts would be similar to or less than those impacts identified for the proposed project or the project alternatives. Access to on-site parking would differ from the project.

Access to the initial 600 car garage would be provided by a driveway, most likely in a similar location as the existing parking lot access on 52nd Street. This driveway would serve 600 parking spaces instead of the current 217 surface parking spaces. Therefore, turn movements in and out of the driveway on 52nd Street would be of concern.

Traffic volumes for the intersection of the driveway with 52nd Street were estimated based on traffic counts and projected hospital traffic generation and traffic distribution. An analysis of intersection operations as an unsignalized intersection assuming the existing lane configurations (single lanes on all approaches) indicates that level of service "A" operation would be provided on all movements during the AM peak. During the PM peak, the left turn movement from eastbound 52nd Street to the garage driveway would operate at level of service "A," while the left turn from the driveway to westbound 52nd Street would operate at level of service "C." There would be no unacceptable delays for turn movements to and from the garage driveway. However, vehicles waiting to turn left from 52nd Street block eastbound through movements on 52nd Street. If there are any significant delays, queued vehicles could back up to Martin Luther King, Jr. Way.

It is recommended that entry control gates on the garage driveway be located at least 100 feet from 52nd Street, to ensure that entry gate operations do not interfere with turns into the driveway from 52nd Street. To improve traffic operations on 52nd Street, 52nd Street could be widened by 12 feet between Martin Luther King, Jr. Way and the initial phase parking garage driveway. A transition to the existing street width could be constructed east of the driveway. The widening could provide for development of a left-turn pocket for vehicles turning left from eastbound 52nd Street to the driveway. The westbound approach on 52nd Street at Martin Luther King, Jr. Way could also be restriped to provide two approach lanes.

MITIGATION

Mitigation measures are discussed separately for existing conditions, the proposed street closure and the proposed additional buildings.

Street Closure

The proposed closure of 52nd Street included in the Children's Hospital project would divert existing traffic and change operations at several intersections.

Intersection Improvements

The diversion of existing traffic levels caused by closure of 52nd Street would cause unacceptable (level of service "E" or "F") peak-hour traffic operations at the intersections of Martin Luther King, Jr. Way and 55th Street, Shattuck Avenue and 52nd Street, and Shattuck Avenue and 55th Street. The following street improvements are identified to provide acceptable traffic operations at these locations.

- Martin Luther King Jr. Way and 55th Street. The existing signal operation would not provide sufficient capacity for the projected left turn volume from southbound Martin Luther King, Jr. Way to eastbound 55th Street. The signal could be revised to provide an exclusive left-turn phase for the southbound left turn. Also, the signal cycle length could be increased from 80 to 90 seconds during the PM peak period. These changes would provide level of service "D" (maximum demand/capacity ratio of 0.87) during the PM peak hour.
- Shattuck Avenue and 52nd Street. Traffic diversions caused by street closure would increase the left turn volume from southbound Shattuck Avenue to eastbound 52nd Street. The existing intersection configuration would not provide adequate capacity for this movement. The southbound approach on Shattuck Avenue could be widened from two lanes to three lanes (see Figure 30). The widening would require additional right-of-way from the hospital's Gulf Lot. The southbound approach could be restriped to provide one left turn lane, one through lane, and one right turn lane with on-street parking prohibited. In the westbound direction at the 52nd Street and Shattuck Avenue intersection the curb lane could be striped as a right turn lane and on-street parking could be prohibited. To improve operations, the existing merge between westbound 52nd Street and 51st Street could be modified. This would eliminate the merge movement and instead turn 52nd Street to intersect 51st Street at a stop sign controlled, right-turn-only intersection. These improvements would allow the intersection of Shattuck and 52nd to operate at level of service "D" (maximum demand/capacity ratio of 0.86) during the PM peak hour.

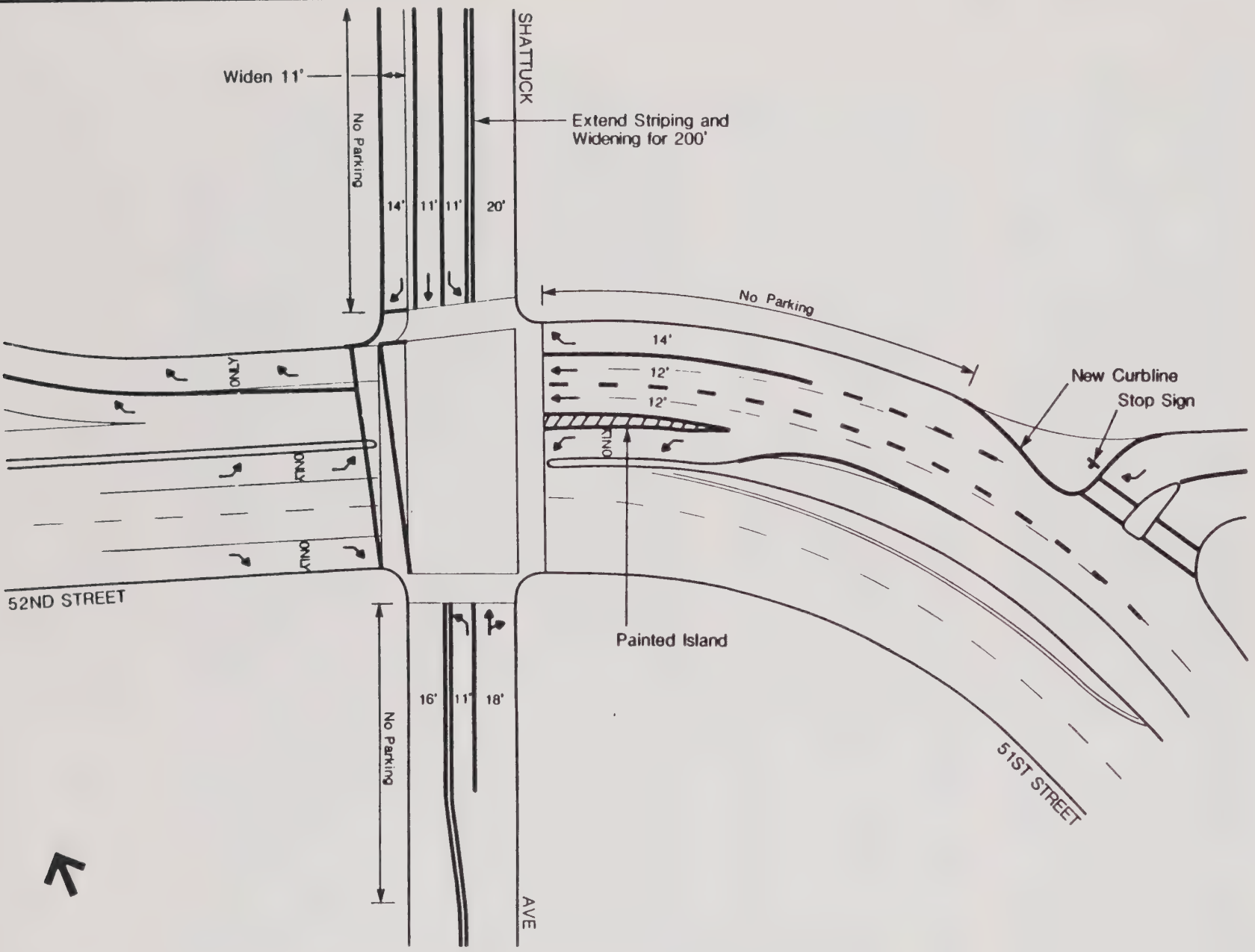


FIGURE 30
SHATTUCK AVENUE AND 52ND STREET
INTERSECTION MITIGATION

IV. Environmental Setting, Impacts and Mitigation Measures

- Shattuck Avenue and 55th Street. Operations at this intersection would be mitigated by restriping the eastbound approach on 55th Street to provide a right turn lane, and restriping the northbound approach on Shattuck Avenue to provide a left turn lane (see Figure 31). Parking could be removed as necessary. These improvements would provide level of service "C" operations (maximum demand/capacity ration of 0.75) during the PM peak hour.

If diverted traffic uses Telegraph Avenue instead of Shattuck Avenue, the need for improvements on Shattuck Avenue at 52nd Street and 55th Street would be reduced. However, the following changes in traffic control on Telegraph Avenue could be considered.

- Telegraph Avenue and 55th Street. If a significant portion of the current through traffic on 52nd Street used Telegraph Avenue instead of Shattuck Avenue, the installation of a signal at this intersection would be a higher priority than is warranted by existing conditions.
- Telegraph Avenue and 51st Street. Additional traffic diversion to Telegraph Avenue would reduce green time requirements for through traffic on 51st Street, and increase green time requirements for southbound left turn from Telegraph Avenue. Protected left turn signal phases would be recommended on Telegraph Avenue.

The street improvements listed above for the intersections of Martin Luther King, Jr. Way and 55th Street, Shattuck Avenue and 52nd Street, and Shattuck Avenue and 55th Street could be implemented before 52nd Street is closed to through traffic for the project. The improvements would not be required to mitigate project impacts if 52nd Street remains open (as with Alternatives E and F). The City could periodically monitor traffic conditions at the intersections to refine recommended changes in signal cycle length and operations based on actual traffic conditions.

Emergency Access

The closure of 52nd Street would impact the response times for emergency vehicles in the Children's Hospital area. This impact could not be mitigated unless an immediately adjacent alternate route could be developed. Alternate routes are limited by the availability of freeway undercrossings.

- It may be possible to design 52nd Street as a pedestrian street which is accessible to emergency vehicles. This would require significant design revisions to the proposed auto turnarounds and the pedestrian plaza. Special pavement could be used to distinguish the pedestrian street from vehicle streets and sidewalk areas, and mountable curbs could be

provided on the east and west ends of the vacated portion of the street. In addition, removable or "knock down" barriers could be used to restrict through traffic. Appropriate traffic control signs and enforcement would be necessary to prevent private vehicles from using the street. The pedestrian street could also be potentially used for hospital shuttles and transit vehicles.

This design option could improve emergency vehicle response times compared to the proposed project, but it may introduce a safety hazard. Pedestrians at the hospital would not generally expect to see vehicles on the pedestrian street. When an emergency vehicle actually uses the street, there would be a potential for accidents.

Proposed Project

The additional hospital and parking space included in the Children's Hospital project would not create any additional significant traffic impacts beyond those discussed as street closure impacts.

Street Improvements

No additional street improvements are identified to mitigate the impacts of traffic generated by new development at Children's Hospital, beyond those recommended to mitigate the impacts of street closure.

- The westbound approach of the hospital entrance at Martin Luther King, Jr. Way, opposite 52nd Street, could be widened to provide two westbound lanes and one eastbound lane. This reconfiguration would improve operation of traffic exiting the hospital driveway.

Transit

The Children's Hospital project would not add significantly to transit loadings on the AC Transit bus lines serving the site.

- The hospital should continue to encourage greater use of transit by employees and visitors, through shuttle services to BART and promotion of transit information and passes. In addition, final design of the Children's Hospital site should include features which will encourage transit use. These would include adequate sidewalk width at bus stops, passenger shelters at bus stops, and clear and safe pedestrian paths between transit loading areas and building entrances.

- The closure of 52nd Street would require the identification alternative routings for bus lines which were proposed to serve 52nd Street.

Parking

The proposed garage would allow more of the parking demand generated by Children's Hospital to be accommodated in off-street lots. Parking impacts on the surrounding neighborhood would be significantly reduced, from 560 maximum on-street parked vehicles to 240 maximum on-street parked vehicles during peak periods.

- The hospital could continue to use the existing remote parking lots in order to ensure that neighborhood impacts are minimized.

Pedestrians

The proposed closure of 52nd Street would mitigate most of the existing and future pedestrian-vehicle conflicts for Children's Hospital visitors and employees. Major pedestrian routes, such as those connecting the two main structures and the parking garage, should be well lighted and designed without obstacles and with adequate width to accommodate projected pedestrian flows. A signalized crosswalk should be maintained across the hospital entrance driveway at Martin Luther King, Jr. Way.

Bicycles

Closure of 52nd Street and resulting traffic increases on 55th Street would impact bicyclists on the West/52nd/Dover Streets and the 55th Street bicycle routes.

- Bicycle lanes could be striped in 55th Street between Martin Luther King, Jr. Way and Shattuck Avenue, and on Martin Luther King, Jr. Way between 52nd and 55th Streets. Bicycle commute routes should be revised, using West Street, 52nd Street, Martin Luther King, Jr. Way, 53rd Street, and Dover Street in the northbound direction, and using Dover Street, 55th Street, Martin Luther King, Jr. Way and West Street in the southbound direction. This would allow cyclists to make left turns at signalized intersections only.

Transportation System Management

- Children's Hospital should maintain, improve or implement appropriate transportation system management (TSM) measures to reduce traffic and parking impacts caused by additional development at the site. These measures could include shuttles to BART stations, promotion of alternative commute modes (transit, bicycles, ridesharing), on-site distribution of transit passes and transit and ridesharing information, safe and convenient bicycle parking areas, and priority parking for cars and vanpools.

Project Site Plan

The site plan evaluation identified several design features which would improve circulation within the project site:

- Provide three total lanes on the driveway to Martin Luther King, Jr. Way (40 foot width). Extend the three lane section to the parking garage, and provide two-way operation on the entire driveway.
- Operate the circular passenger drop-off on the west side of the project as a one-way (counter-clockwise) turnout from the main driveway.
- The west access to the parking garage should provide three total lanes: one inbound, one outbound and one reversible center lane.
- The east parking garage access should provide two total lanes: one inbound and one outbound. The gates should be set back 50 feet from Dover Street.
- A Dover Street service driveway for the proposed Ambulatory Services Center should be located at least 50 feet from the parking garage driveway. If possible, the loading area should provide space for trucks to turn around within the loading area.

Cumulative

An additional street improvement was identified to mitigate traffic impacts caused by cumulative development in the Children's Hospital area.

The intersection of Telegraph Avenue and 51st Street was projected to operate at level of service "E" during the PM peak hour with traffic added by cumulative development.

- Operations could be improved by removing parking as necessary and restriping the northbound and westbound approaches to provide right-turn pockets. Protected left-turn signal phases could be provided on Telegraph Avenue. With the right-turn pockets, an increase in cycle length to 120 seconds would provide level of service "D" operations (maximum demand/capacity ratio of 0.88).

NOTES - Transportation, Circulation and Parking

- /1/ Caltrans, 1987 Traffic Volumes on the California State Highway System, 1987.
- /2/ Traffic flow field observations made by DKS Associates, September, 1987.
- /3/ Traffic volume counts conducted by DKS Associates, September and October, 1987 and July, 1988.
- /4/ AC Transit Basic Route Map, April, 1988.
- /5/ Bay Area Rapid Transit District, weekday schedule of service, February, 1988.
- /6/ Tim Dorman, Director of Security and Safety, Children's Hospital Medical Center, personal communication, October, 1987.
- /7/ On-street parking surveys conducted by DKS Associates, October, 1987 and June, 1988.
- /8/ American Medical Buildings, Parking Study for Children's Hospital Medical Center, February 18, 1986.
- /9/ Pedestrian activity from field counts and observations conducted by DKS Associates, 1987 and 1988.
- /10/ City of Oakland, Traffic Engineering Department, unpublished collision diagrams.
- /11/ Institute of Transportation Engineers, Trip Generation, 1987.
- /12/ Ariel Bryant, Oakland Fire Prevention Bureau, personal communication, September, 1987.
- /13/ Ron Kilcoyne, Planner, AC Transit, personal communication, August, 1988.
- /14/ Transportation Research Board, Highway Capacity Manual, 1985.
- /15/ Lois Park, Oakland Office of Economic Development and Employment, personal communication, June, 1988.
- /16/ Jay Musanti, Oakland Office of Economic Development and Employment, personal communication, June, 1988.
- /17/ Charles Bryant, Planner, Oakland City Planning Department, personal communication, June, 1989.
- /18/ Queue length calculations are based on methods described in the Swedish Capacity Manual.
- /19/ Service rates and queue calculations at parking garage entrances and exits are based on methods from Crommelin, Robert, Entrance-Exit Design and Control for Major Parking Facilities, 1972.
- /20/ Caltrans, Traffic Manual, 1986.
- /21/ Donald Appleyard, Livable Streets, 1981.

D. AIR QUALITY

SETTING

Climate and Meteorology

The climate of Oakland is shaped by the same forces that influence and control the overall weather patterns in Northern California. Summer weather is highly influenced by the semi-permanent Eastern Pacific high pressure zone. High-pressure systems characteristically supply dry air that warms as it descends. This dry, subsiding air often acts as a cap over the cooler marine air near the surface and restricts precipitation. Subsidence inversions may be several thousand feet deep and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog, of which the largest single component is ozone. In addition, summer winds are generally light and provide little ventilation of pollutant emissions.

During winter, the Pacific high-pressure zone breaks down, allowing numerous Pacific fronts to sweep through the area. Thirty to forty of these storms can be expected per year, bringing over 90% of the region's precipitation. Between storms there are periods of stagnation characterized by very light surface winds. Surface inversions can form under these conditions, most often observed in the morning from October to February. They are caused by radiational cooling of land surfaces rather than subsiding air and can also trap pollutant emissions close to the ground.

Summer winds in the area are influenced by the same dynamics which shape the winds throughout the San Francisco Bay Area. Northwesterly winds, generated by the high pressure zone in the Pacific, are drawn through the Golden Gate and forced into a more westerly orientation. Once inside the Bay Area, this air mass is split and rechanneled by the East Bay hills, producing south to southeasterly winds at Santa Rosa and northwesterly winds at San Jose. Winter winds are associated mostly with frontal passages, with winds from the south or southwest before passage and northwest winds behind the front. Local topography also affects winds with the north-south orientation of bordering mountain ranges channeling air movement. Winds are monitored at the Oakland Airport. Over 46% of the hourly observations recorded at this station revealed winds from the west to northwest at a speed of about ten miles per hour and about 8% of the observations revealed calm conditions./1/

Air Quality Regulations, Plans, and Policies

Air quality is controlled through the attainment of ambient standards and enforcement of emission limits for individual air pollutant sources. The federal Clean Air Act required the U.S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS), levels for protection of public health and welfare. NAAQS have been established for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), suspended particulate matter (PM₁₀), and lead (Pb). California has adopted more stringent ambient standards for these "criteria" pollutants. The Clean Air Act Amendments of 1977 required states to identify areas that were in non-attainment of the NAAQS and to develop State Implementation Plans (SIPs) that demonstrated how the non-attainment areas would be brought into compliance by 1982. Extensions for attainment were granted to 1987 upon EPA approval.

The project area is located in the San Francisco Bay Area Air Basin which has been designated as a non-attainment area with regards to NAAQS for O₃ and CO. Attainment status has been designated for the Basin, however, for the NAAQS for NO₂ and SO₂.^{/2/} Although the NAAQS for suspended particulate matter has recently been revised to apply to smaller-diameter particulates (those less than ten microns, PM₁₀) rather than to total suspended particulates (TSP) and little PM₁₀ has been gathered, the Bay Area, with the possible exception of Santa Clara County, will probably be designated an attainment area for the PM₁₀ NAAQS.

An Air Quality Plan for the Basin has been adopted and incorporated into the California SIP.^{/3/} The Plan describes air pollution control strategies intended to bring the Bay Area into attainment for all of the NAAQS by 1987. This deadline has passed and the Bay Area remains in non-attainment for O₃ and CO. Future Air Quality Plans for the Bay Area will be developed in conjunction with future amendments to the Clean Air Act. The EPA has required that the Air Quality Plan be updated by 1991.

The Bay Area Air Quality Management District (BAAQMD) is the local agency empowered to regulate air pollutant emissions. The BAAQMD regulates air quality through its permit authority for most types of stationary emissions sources and through its planning and review activities.

Existing Air Quality

The BAAQMD operates a regional air quality monitoring network that provides information on average concentrations of those pollutants for which state or federal agencies have established ambient air quality standards. Table 12 is a five-year summary of monitoring data for these major pollutants, collected at the BAAQMD's Oakland and Richmond stations. Pollutant concentrations are compared with the corresponding state ambient air quality standards, which are more stringent than the corresponding federal standards.

Ozone (O₃). The most severe air quality problem in the Bay Area is high concentrations of O₃. High levels of O₃ cause eye irritation and can impair respiratory functions. Ozone is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving hydrocarbons (HC) and nitrogen oxides (NO_x).

Significant O₃ generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April to October are the "ozone season." O₃ is a regional pollutant because O₃ precursors are transported and diffused by wind concurrently with the reaction process. The numerous small sources emitting most of the HC and NO_x are spread throughout the region. Table 12 shows that the state O₃ standard was exceeded four times in Oakland from 1984 to 1988.

Carbon Monoxide (CO). About 92% of the CO emitted in the Bay area comes from motor vehicles./4/ Ambient CO levels normally correspond closely to the spatial and temporal distributions of vehicular traffic. CO levels are also influenced by wind speed and atmospheric mixing. Under inversion conditions, CO levels may be more uniformly distributed over an area out to some distance from vehicular sources. High levels of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease and cause fatigue, headaches, and dizziness. Neither the state one-hour CO standard nor the state eight-hour CO standard were exceeded in the past five years in Oakland (see Table 12); however, relatively high levels would be expected along heavily travelled roads and near busy intersections.

Suspended Particulate (PM₁₀). Both state and federal particulate standards now apply to smaller-diameter particulates rather than to total suspended particulates (TSP). TSP refers to particulates with a diameter of 30 microns or less while PM₁₀ refers to that fraction of TSP with

TABLE 12: OAKLAND AIR POLLUTANT SUMMARY, 1984-1988/a/

Station: Alice Street, Oakland

<u>POLLUTANT:</u>	<u>STANDARD</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
<u>Ozone (O₃; Oxidant)</u>						
Highest 1-hr. average, ppm/b/	0.10/c/	0.11	0.12	0.09	0.09	0.10
Number of standard excesses		2	1	0	0	1
<u>Carbon Monoxide (CO)</u>						
Highest 1-hr. average, ppm	20.0/d/	11	9	12	9	10
Number of standard excesses		0	0	0	0	0
Highest 8-hr. average, ppm	9.0/d/	8.0	5.8	7.5	4.9	5.6
Number of standard excesses	0	0	0	0	0	0
<u>Nitrogen Dioxide (NO₂)</u>						
Highest 1-hr. average, ppm	0.25/d/	0.15	0.11	0.13	0.0	0.11
Number of standard excesses		0	0	0	0	0
<u>Lead (Pb)</u>						
Highest 30-day average, ug/m ³	1.5/c/	0.36	0.15	0.16	0.16	0.15
Number of standard excesses		0	0	0	0	0
<u>Total Suspended Particulate (TSP)</u>						
Highest 24-hr. average, ug/m ³ /b,e/	100 /d,f/	142	125	85	99	73
Number of standard excesses		3	2	0	0	0
Annual Geometric Mean, ug/m ³	60.0/d,f/	55.8	52.9	37.8	43.0	40.9

/a/ Air quality data for O₃ and CO are from the Alice Street monitoring station. Data for NO₂, SO₂ and TSP are from the 13th Street monitoring station in Richmond.

/b/ ppm: parts per million; ug/m³: micrograms per cubic meter.

/c/ State standard, not to be equaled or exceeded.

/d/ State standard, may be equaled but not exceeded.

/e/ Measured every six days (other pollutants are measured continuously).

/f/ The California Air Resources Board (ARB) has redefined this standard to apply to "inhalable" particles only (i.e., those less than 10 microns in diameter). The new 24-hr. standard is 50 ug/m³ and the new annual geometric mean is 30 ug/m³. Data on the particle size distribution of the TSP sampled at the Oakland monitoring station is unavailable. According to the ARB, however, the new standards are "reasonably equivalent" to the old standards shown in the above table (see BAAQMD, Air Currents, March 1983).

Sources: California Air Resources Board, California Air Quality Data Summaries, 1984-1988.

diameters of 10 microns or less. Recent studies have shown that the smaller-diameter particulates represent the health hazard posed by suspended particulate matter. TSP levels at the Richmond monitoring station exceeded state standards in 1985 on two occasions and in 1984 on three occasions. No data on PM₁₀ are available for the Oakland or Richmond stations.

Nitrogen Dioxide (NO₂). NO₂ is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. The major sources of NO₂ are vehicular, residential, and industrial combustion. The standards for NO₂ are being met in the Bay Area, and the BAAQMD does not expect these standards to be exceeded in the future.

Lead (Pb). Gasoline-powered automobile engines are a major source of airborne Pb, although the use of leaded fuel is being reduced. Lead can cause hematological (blood-related) effects, such as anemia (iron-deficient blood) and inhibition of enzymes involved in blood synthesis. Lead may also affect the central nervous and reproductive systems. Ambient Pb levels have dropped dramatically as the percentage of motor vehicles using leaded gasoline has continued to decrease. No violations of the Pb standard have been recorded in Oakland in the last five years.

Sulfur Dioxide (SO₂). The major source of SO₂ in the Air Basin is combustion of high-sulfur fuels. SO₂ is monitored at the Richmond monitoring station, but that data is not included in this report because the data would not be representative of SO₂ levels in Oakland due to the presence of oil refineries, a source of SO₂, in Richmond. Ambient standards for SO₂ are being met throughout the Bay Area, and the BAAQMD does not expect these standards to be exceeded in the future.

Sensitive Receptors

Land uses such as schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the young, the old, and the infirm are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Agricultural crops, especially broad-leaved produce crops and cultivated flowers, are also sensitive to air pollutants such as O₃, NO_x, and SO₂.

Because people in residential districts are often at home for extended periods, the exposure times to air pollutants are quite long. Industrial and commercial districts are less sensitive to poor air quality because exposure periods are shorter and workers in these districts are, in general, the healthiest segment of the public. Recreational land uses are moderately sensitive to air pollution. Although exposure periods are generally short in such places, vigorous exercise associated with recreation places a high demand on the human respiratory functions, which air pollution can impair. Noticeable air pollution also detracts from the recreational experience.

The sensitive receptors in the project area include the Children's Hospital and residences on 52nd, 53rd, and Dover Streets.

Major Point Sources

The BAAQMD lists seven major point sources of air pollution emissions in the City of Oakland.^{5/} The nearest source is Walker's Concrete, Inc., at 2400 Peralta Street; it is approximately two miles south of the project site.

IMPACT

Construction

Project construction would temporarily affect local air quality primarily through fugitive dust emissions due to vehicle movement and other construction-related activities. Additional construction exhaust emissions would be generated by construction vehicles and equipment; however, these emissions would be minor and would have an insignificant effect on local and regional air quality.

Particulate matter, in the form of fugitive dust, would be generated through land clearing, excavation, and grading activities and through movement of trucks and heavy equipment. Fugitive dust emissions would vary according to the level and type of activity, silt content of soil, and prevailing weather. Construction-related fugitive dust consists of larger-sized particles (greater than 10 microns in diameter) as well as the finer particles that account for ambient PM₁₀ levels. The larger-sized particles would be more of a nuisance than a health hazard, except to persons with respiratory problems, and would settle out of the atmosphere near the proposed project. The finer particles raised by construction would contribute to background PM₁₀ levels to the extent that the state 24-hour average ambient standard, 50 micrograms per cubic meter, could be exceeded on occasion in the vicinity of construction. Based on its potential as a nuisance and to cause excesses of health-based standards and the nuisance it would cause, the fugitive dust generated by project construction could have a significant, albeit temporary, effect on local air quality.

Project Operation

The operational air quality impacts of the project would result primarily from motor vehicle emissions. Project-related vehicle emissions are presented in Table 13. These calculated emissions are based on vehicle miles travelled and EMFAC7D emissions factors and are compared to transportation-related emissions in Alameda County. The project would generate about 450 pounds per day (lb/day) of CO, 18 lb/day of HC, 37 lb/day of NO_x, 6 lb/day of SO₂, and 65 lb/day of TSP.

TABLE 13: TRANSPORTATION EMISSIONS INVENTORY BASED ON PROJECT-GENERATED TRAFFIC

<u>Pollutant</u>	<u>Project Generated (lb/day)/a/</u>	<u>Year 2000 Alameda County (lb/day)/b/</u>	<u>Project as Percent of County</u>
Carbon Monoxide	445	598,000	0.07
Hydrocarbons	18	68,000	0.03
Nitrogen Oxides	37	120,000	0.03
Sulfur Dioxide	6	34,000	0.02
Total Suspended Particulates	65	276,000	0.02%

/a/ Based on 1,252 daily vehicle trips, an average trip length of 10.4 miles, and year 2000 EMFAC7D composite emission factors.

/b/ Based on BAAQMD, Base Year 1983 Emissions Inventory Summary Report (August 1987).

Source: Environmental Science Associates, Inc.

The BAAQMD's Guidelines for Assessing the Impacts of Projects and Plans contains significance tests to help identify projects with potentially significant effects on air quality. For mobile source emissions of CO, the Guidelines have two significance tests. One of the tests involves comparing project emissions of CO with the transportation-related CO emissions of the County in which a project would be located. A project that would generate mobile source emissions of CO greater than one percent of county-wide, transportation-related emissions of CO would be considered potentially significant with regards to local air quality. As shown in Table 13, project CO emissions would be considerably less than this one-percent threshold. The other test for mobile source emissions of CO involves determining the effect of project traffic on local CO concentrations with reference to established ambient standards. Project effects on local CO levels are discussed below.

For mobile source emissions of the other major pollutants, the Guidelines recommends comparing project emissions with the emissions threshold level used for requiring pollutant abatement equipment on stationary sources. For these pollutants, the threshold level is 150 lb/day. As shown in Table 13, project emissions of these pollutants would be considerably less than the 150 lb/day emissions threshold.

Ambient CO Concentrations

The CALINE4 dispersion model, developed by the California Department of Transportation, estimates CO concentrations at a specified receptor distance. Roadside CO concentrations at three intersections in the project area were estimated using CALINE4. Input data included worst-case meteorological conditions, EMFAC7D emission factors, and evening peak-hour traffic volumes and speeds. Results are shown in Table 14.

TABLE 14: EVENING WORST-CASE CARBON MONOXIDE CONCENTRATIONS AT THREE INTERSECTIONS IN THE PROJECT AREA

Location	Averaging Period	CO Concentration (ppm) /a/			
		Existing (1988)	Future (1995)		Future (2000) With Project and Cumulative/e/
			Without Project/c/	With Project/e/	
52rd Street/Dover Street	1-hr. /b/	11.0	9.8	9.1	9.7
	8-hr. /c/	7.8	7.1	6.6	6.9
53rd Street/Martin Luther King Jr., Way	1-hr. /b/	15.2	11.8	11.4	10.9
	8-hr. /c/	<u>10.8</u>	8.5	8.2	7.8
55th Street/Shattuck Avenue	1-hr. /b/	12.3	11.1	13.5	15.8
	8-hr. /c/	8.8	8.0	<u>9.7</u>	<u>11.1</u>

/a/ Estimated using CALINE4 dispersion model, EMFAC7D composite ambient factors, and worst-case meteorological assumptions. CO estimates correspond to the closest sensitive receptor at each given intersection.

/b/ One-hour concentrations include background concentrations of 7.8 ppm for 1988, 6.8 ppm for 1995, and 6.1 ppm for 2000 based on CO monitoring data for 34th Street contained in BAAQMD's Guidelines.

/c/ Eight-hour concentrations are assumed to be 70% of local contribution to one-hour concentration plus background concentration of 5.6 ppm for 1988, 5.0 ppm for 1995, and 4.4 ppm for 2000 based on CO monitoring data for 34th Street contained in BAAQMD's Guidelines.

/d/ Assumes that 52nd Street would be left open.

/e/ Assumes that 52nd Street would be closed from Dover Street to Martin Luther King, Jr. Way.

Source: Environmental Science Associates, Inc.

As shown in Table 14, excesses of the eight-hour average CO standard are estimated to occur under worst-case existing conditions at the intersection of 53rd Street and Martin Luther King, Jr. Way. By 1995, without the project (i.e., assuming 52nd Street remains open), CO levels at

these intersections would be expected to decrease due to the beneficial effects of ongoing site and federal CO emissions control programs for motor vehicles. With the project, CO levels would be higher at those intersections to which traffic is directed (by closing 52nd Street from Dover Street to Martin Luther King, Jr. Way) and lower at those intersections from which traffic would be diverted. One of the intersections most affected by the proposed street closure would be 55th Street and Shattuck Avenue.

With the project, an excess of the eight-hour average standard would occur at the intersection of 55th Street and Shattuck Avenue. This would be a significant effect of the project. If the intersection improvements described in the Transportation section of this report for this intersection were implemented, the level of service would improve from "E" to "C" with a corresponding decrease in worst-case eight-hour average CO levels from 9.7 ppm to 8.6 ppm. Thus, with traffic mitigation that achieves a level of service of "C," the project's significant impact on air quality at this intersection would be reduced to a level of insignificance because 8.6 ppm would be below the ambient standard of 9 ppm. Without intersection mitigation, worst-case eight-hour CO levels at this intersection would increase to about 11.1 ppm by 2000 with the added traffic associated with the two other major developments in the vicinity (see Cumulative Impacts discussion in the Transportation section of this report). Even with intersection improvements at the intersection of 55th Street and Shattuck Avenue, worst-case eight-hour average CO levels in 2000 would be 9.0 ppm, including cumulative traffic volumes. Since this would equal the 9 ppm standard, the proposed project would result in a significant unavoidable cumulative impact on air quality.

By 2000, the primary contributor to CO levels at 55th Street and Shattuck Avenue (assuming a level of service of "C") would be traffic on State Route #24. This analysis assumed a 3% annual growth in peak-hour traffic volumes on State Route #24. Given that this rate of growth would generate a freeway level of service of "F" by 2000 and given that this growth would be unavoidable, the cumulative significant impact on CO levels at 55th Street and Shattuck Avenue would also be unavoidable.

MITIGATION

The following measures would help mitigate adverse air quality effects projected by this study.

Project Construction

To reduce the potentially significant impact on local PM₁₀ levels to a level of insignificance, the following measure is recommended.

- Sprinkle all unpaved construction areas with water at least twice per day during excavation and grading to mitigate the potentially significant effect of fugitive dust emissions due to project construction to a level of insignificance. Twice daily sprinkling could reduce particulate emissions by as much as 50%. Undertake more frequent watering under hot, windy conditions. Sprinkle stockpiles of sand, soil and similar materials to further reduce fugitive dust emissions.

Project Operation

- To reduce the project's significant impact on CO levels at the intersection of 55th Street and Shattuck Avenue to a level of insignificance, the intersection improvement measures discussed in the Transportation section of this report should be implemented. While these measures would offset project effects at this intersection, they would not be sufficient to reduce the cumulative impact to a level of insignificance (i.e. worst-case CO level of 9 ppm).

NOTES - Air Quality

- /1/ California Air Resources Board, 1984, California Surface Wind Climatology.
- /2/ California Air Resources Board, "Attainment/Non-attainment Status," memorandum, October 7, 1985.
- /3/ Association of Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission, 1982, 1982 Bay Area Air Quality Plan.
- /4/ Bay Area Air Quality Management District, August 1987, Emissions Inventory Summary Report.
- /5/ Bay Area Air Quality Management District, Air Quality Handbook, 1987-1988.

E. NOISE

SETTING

Noise Sources and Levels

Environmental noise levels is usually measured in A-weighted decibels (dB)./1/ In general, people can perceive a three-decibel difference in noise levels; a difference of 10 dBA is perceived as a doubling of loudness. Some representative sounds and sound pressure levels are shown in Table 15.

TABLE 15: REPRESENTATIVE SOUNDS AND SOUND PRESSURE LEVELS

<u>Sound Source</u>	<u>Sound Pressure Level (dBA)</u>
Jet take-off Riveting	120-130
Sonic Boom Amplified Music	100-120
Unmuffled Truck Busy Street Noise	80-100
Noisy Office Average Radio	60-80
Noisy Home Average Conversation	40-60
Whisper Human Breathing	10-20

Source: C. Lawrence Cornett and Charles E. Hina, Methods for Predicting Noise and Vibration Impacts, Department of Transportation, Transportation Systems Center, 1979.

Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Useful noise descriptors measure time-averaged noise levels; these descriptors include L_{eq} and $L_{dn}/2,3/$ The L_{eq} is the actual time-averaged noise level, while L_{dn} is a 24-hour noise measurement which accounts for greater sensitivity of most people to nighttime noise. The L_{dn} noise descriptor is commonly used in establishing noise exposure guidelines for specific land uses.

Three short-term noise measurements during the peak evening traffic period and one 24-hour noise measurement were made to quantify the ambient noise in the project area./4/ The noise measurement results are displayed in Table 16. The highest ambient noise level, 72 dBA, L_{eq} was recorded on 53rd Street, near Martin Luther King Drive, Jr., Way; the predominant noise source was vehicular traffic on Martin Luther King, Jr., Way. The noise level recorded on 55th

TABLE 16: EXISTING NOISE LEVELS IN THE PROJECT AREA/a/

<u>Location</u>	<u>Measurement Period</u>	<u>Distance from Roadway Centerline(feet)</u>	<u>Noise Level (dBA)</u>	
			<u>L_{eq}</u>	<u>L_{dn}</u>
53rd Street/Martin Luther King, Jr., Way	4:28-4:43 p.m.	25	72	NA
52nd Street/Dover Street	4:47-5:02 p.m.	20	66	NA
55th Street/Shattuck Avenue	5:06-5:21 p.m.	25	67	NA
53rd Street/Dover Street	10:00p.m.-7:00a.m. 7:00a.m.-10:00p.m.	10	NA	63

/a/ Noise levels were measured on May 24, 1988 using a Metrosonics dB-306 Metrologger which was calibrated before and after each measurement.

Source: Environmental Science Associates, Inc.

Street, near Shattuck Avenue, was 67 dBA, L_{eq} ; traffic-generated noise on both 55th Street and Shattuck Avenue contributed to the ambient noise level. The noise level recorded at the intersection of 52nd and Dover Streets was 66 dBA, L_{eq} . The major noise source was traffic on 52nd and Dover Streets. The 24-hour noise level at 53rd Street, near Dover Street, was 63 dBA, L_{dn} .

At a relevance level of 50 feet from the centerlines of the roads, peak-hour noise levels are about 69 dBA, L_{eq} at the intersection of Martin Luther King, Jr. Way and 53rd Street and about 64 dBA at the other two intersections where measurements were made. Peak hour noise levels at the intersection of Martin Luther King, Jr. Way and 45th Street are probably the same (i.e. 64 dBA, L_{eq}) as those at Dover Street and 52nd Street because existing peak-hour traffic volumes through these intersections are virtually the same.

Noise Standards, Plans, and Policies

The City of Oakland has adopted the U.S. Department of Housing and Urban Development noise standards. The maximum "normally acceptable" noise level for residential areas and hospitals is 65 dBA, $L_{dn}/5/$

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure time and "insulation" from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses.

Sensitive receptors in the project area include Children's Hospital and residences along 52nd, 53rd, and Dover Streets.

IMPACTS

Construction Noise

Construction of the proposed project would generate high noise levels on and adjacent to the development site intermittently during construction. Table 17 shows typical outdoor noise levels for commercial construction. Assuming 25 dBA attenuation due to standard building design features, interior noise levels in the existing Hospital and in nearby residences would be about 62 dBA./6/

Traffic-Generated Noise

The transportation analysis of this document describes the changes in traffic volumes on roadways in the vicinity of the project due to project-generated trips and the diversion of existing volumes by closure of 52nd Street. The result of the project, including the closure of 52nd Street, would be an 80% increase in traffic on 55th Street between Shattuck Avenue and Martin Luther King Jr., Way, a 56% increase on 45th Street between Martin Luther King Jr., Way and Shattuck Avenue, and a 26% increase on Shattuck Avenue between 52nd Street and 55th Street. There would be decreases in traffic volumes on 52nd Street near Dover Street and on Martin Luther King Jr., Way between 52nd Street and 55th Street.

TABLE 17: TYPICAL COMMERCIAL CONSTRUCTION NOISE LEVELS /a/

<u>Construction Phase</u>	<u>Noise Level (dBA)</u>
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

/a/ Noise levels at 50 feet from the source.

Source: Bolt, Berenek, and Newman, 1971, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, U.S. Environmental Protection Agency.

A 100% increase in traffic volumes corresponds to an increase of three dBA, the threshold of noticeable change in ambient noise levels. Thus, the changes in traffic distribution would not cause a noticeable change in the ambient noise environment. Existing and future noise levels are shown in Table 18.

The existing 24-hour average noise level at the intersection of 53rd and Dover Streets is 63 dBA, L_{dn} . Projected future traffic patterns (as affected by the project) indicate a 15% decrease in vehicle volumes on 53rd Street, and a 62% increase in vehicle volumes along Dover Street. Traffic volumes, however, would remain relatively low, so the variation in traffic flow would not substantially affect the 24-hour average noise level. The future 24-hour average noise level would remain the same as the existing level, 63 dBA, L_{dn} , which is within the "normally acceptable" level for residential areas and hospitals in Oakland.

Figure 32 displays 70, 65, and 60 dBA, L_{dn} contours for a three-block radius surrounding Oakland Children's Hospital for existing and future conditions. Existing and future noise contours would be virtually the same. The FHWA's SNAP 1.0 noise model was used to develop the contours. Input data included future plus project traffic volumes; however, the map applies generally to existing and future (without the project) noise levels, as well. The noise contours are mainly influenced by vehicular traffic along major routes such as Highway 24 and Martin Luther King, Jr. Way; project-generated traffic would not sufficiently increase the existing large

TABLE 18: EVENING PEAK-HOUR TRAFFIC NOISE LEVELS AT SELECTED INTERSECTIONS IN THE PROJECT AREA

<u>Location</u>	<u>Noise Levels (dBA, L_{eq}) /a/</u>			
	<u>Existing</u>	<u>No Project</u>	<u>Existing + Project /b/</u>	<u>Existing + Project + Cumulative /b,c/</u>
53rd Street/Martin Luther King, Jr. Way	72	72	70	71
52nd Street/Dover Street	66	66	64	64
55th Street/Shattuck Avenue	67	67	68	69

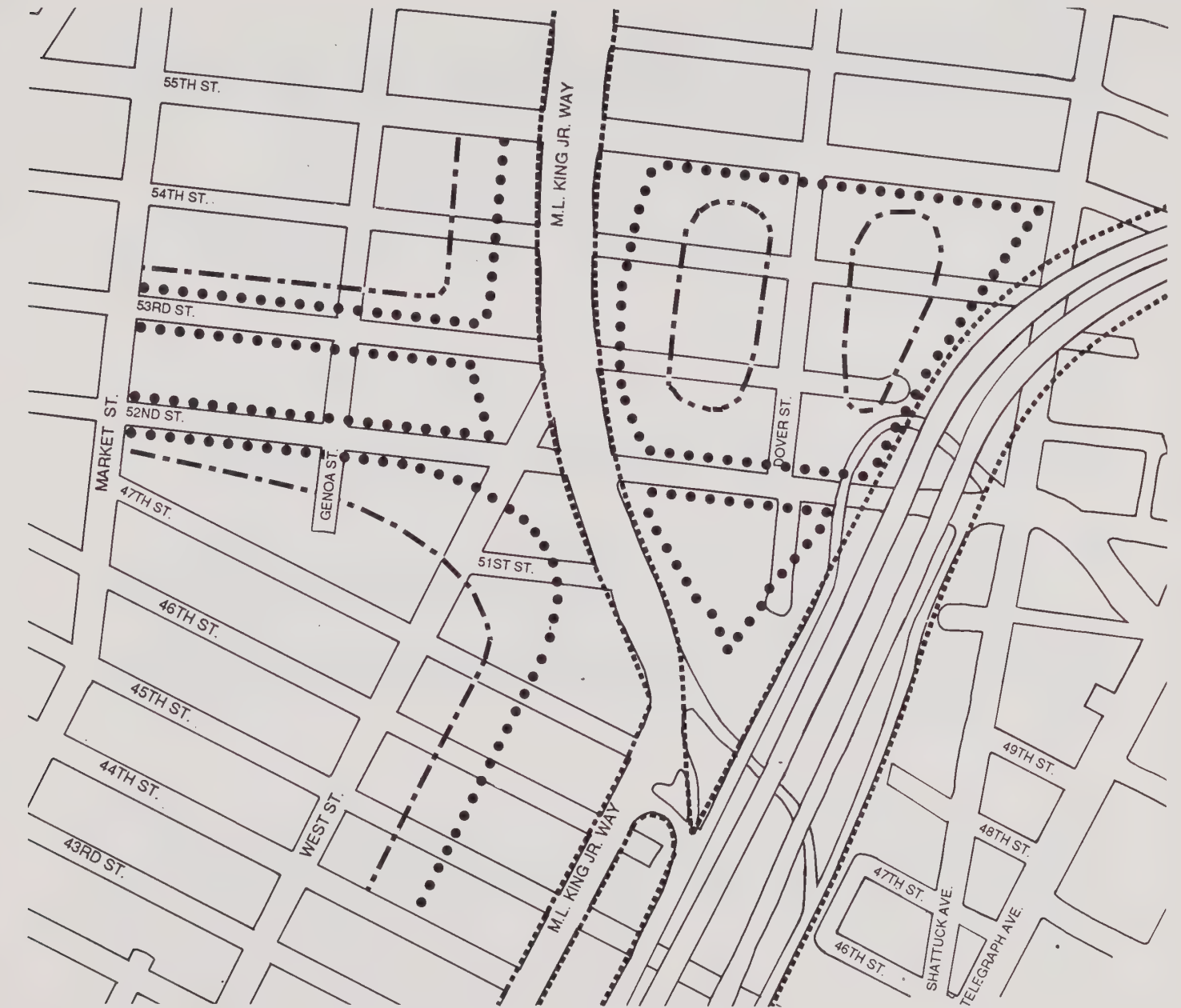
/a/ The Federal Highway Noise Prediction Model (T.M. Barry and J.A. Reagan, Federal Highway Administration Traffic Noise Prediction Model, Report No. FHWA-RD-77-108, 1978) was used to calculate future noise levels. Input data included traffic volumes, traffic speeds, and receptor distances.

/b/ Assumes closure of 52nd Street from Dover Street to Martin Luther King Jr., Way.

/c/ Includes the two cumulative projects discussed in the Transportation section of this report.

Source: Environmental Science Associates, Inc.

volumes along these major roadways to affect the shape of the contours. The contours were adjusted to account for shielding and to correspond to recent ESA short-term noise measurements.



LEGEND

- = 60 dBA, Ldn
- ... = 65 dBA, Ldn
- = 70 dBA, Ldn



MITIGATION

The following mitigation measures would reduce construction noise impacts:

- Schedule construction between 8:00 a.m. and 6:00 p.m., Monday through Saturday.
- Schedule noisy construction activities in shifts to avoid high noise levels caused by operating several pieces of equipment simultaneously.
- Require the project contractor to use power construction equipment with state-of-the-art noise shielding and muffling devices.
- Place barriers around the project site and around stationary equipment such as compressors, which would reduce construction noise by as much as five dBA.

NOTES - Noise

- /1/ A decibel (dB) is a logarithmic unit of sound energy intensity. Sound waves, travelling outward from a source, exert a sound pressure level (commonly called "sound level"), measured in decibels. A dBA is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.
- /2/ L_{eq} is the equivalent steady-state sound level, which, in a stated period, would contain the same acoustic energy as the time-varying sound level during the same period.
- /3/ L_{dn} , the day-night average noise level, is based on human reaction to cumulative noise exposure over a 24-hour period. Noise between 10:00 p.m. and 7:00 a.m. is weighted by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- /4/ Ambient noise is the total noise associated with a given environment and usually comprises sounds from many sources both near and far.
- /5/ "Normally acceptable" implies that the noise exposure is great enough to be of some concern, but common building construction will make the indoor environment acceptable, even for sleeping quarters.
- /6/ Human response to noise is subjective and varies considerably from one individual to another. Effects of noise include interference with sleep, concentration, and communication; physiological stress; and hearing loss. The sound level of speech is typically 60 to 65 dBA. In general, noise begins to interfere with a listener's understanding of speech when it exceeds 55 to 60 dBA. Sleep is disturbed when interior noise levels exceed 50 dBA.

F. GEOLOGY, SOILS AND SEISMICITY

SETTING

Topography

The site is located on the alluvial fan surface between the Berkeley Hills to the east and San Francisco Bay to the west. Elevation at the site is about 100 feet above mean sea level (msl).^{/1/} The ground surface in the site vicinity slopes to the west at a relatively uniform gradient of 1.5%. The proposed site is developed with residences and parking lots and is nearly level.

Geology

The site is on an alluvial fan emanating from the Berkeley Hills to the east. Substrate is gravels, sand, silt and clay of the Pleistocene age (2 million to 10,000 years ago) Temescal Formation.^{/2/} Based on soil borings conducted about 20 to 100 feet east of the site, near surface materials consist of silty clays to clayey sands.^{/3/} Bedrock is Franciscan Formation sandstone, siltstone, chert and shale of Jurassic to Cretaceous Age (208 to 65 million years ago). The depth to bedrock is estimated at about 300 feet.^{/3/}

Soils

The Soil Conservation Service describes soil at the site as Urban Land-Danville complex, which is formed from alluvium from sedimentary rocks and has been extensively altered by urban development. Soil is very deep and well-drained. The erosion hazard is slight. The fine percentage is greater than 50% and because of the clayey composition, the soil has high shrink-swell potential and low strength.^{/4/} A detailed soil investigation has not been prepared for the site.

A soil investigation was prepared for the Family Center, across Dover Street from the site, in 1986.^{/4/} That investigation found about six inches of surface gravelly fill underlain by up to three and one-half feet of clayey fill.^{/4/} It is likely that similar fill is present at the site. The clayey fills have low to moderate shrink-swell potential.^{/4/}

Seismicity

The San Francisco Bay Region is an area of high seismic activity. Active faults in the area include the San Andreas, 17 miles southwest of the site; the Hayward, 2.5 miles east of the site; and the Calaveras, 15 miles southeast of the site./5/ A major earthquake on any of those faults could produce strong groundshaking at the site. The maximum credible rock acceleration is estimated at greater than 0.5 times the acceleration due to gravity./6/ However, the thick alluvial deposits under the site could amplify bedrock motion. The site is not crossed by any known active or potentially active faults and the likelihood of ground surface rupture due to fault movement is remote. The site is not within an Alquist-Priolo Special Studies Zone.

Secondary seismic hazards include liquefaction, settlement, lateral spreading, lurching, seiches, tsunamis and dam failure inundation. Liquefaction affects saturated sands. Because the substrate beneath the site is clayey, it would not be prone to liquefaction. Settlement and lateral spreading affect loose soils. The site is apparently underlain by stiff to very stiff clays, silts and sand which would not be susceptible to liquefaction. Lurching is the horizontal movement of soil embankments, such as creek banks. The site is nearly flat without substantial relief and would not be expected to lurch. The site is not adjacent to any large water bodies and would not be affected by tsunamis or seiches. Temescal Creek is located about 600 feet south of the site. Seismically induced failure of the Lake Temescal dam, upstream from the site, could be a hazard at the site.

IMPACTS

Site Preparation

The project would require removal of the currently existing houses, asphalt, and gravel surface cover at the site. Excavation would be necessary to remove unsuitable and deleterious soils and to allow construction of foundations. No substantial subsurface structures are proposed, therefore the amount of excavation would be limited and is estimated at less than 3,800 cubic yards (cu. yd.) by the sponsor./1/ However, the exact volume of soil to be removed from the site cannot be determined until a detailed soils investigation and foundation design are complete. The site is nearly level and would remain so after project implementation. No significant topographic alterations would result.

In addition to the export of about 3,800 cu. yd. from the site, import of aggregate and engineered fill to the site would occur. The net balance of cutting and filling is not known depending on the final design of foundations and pavement structures. Haul trucks travelling to and from the site could spill or drag soil onto local roads creating a nuisance for motorists.

Geology and Soils

The substrate at the site has low strength and high shrink-swell potential. To remedy these conditions and provide adequate support for buildings, proper site preparation, including placement of engineered fill and special design of foundations would be necessary. Because no geotechnical report has been prepared for the project, specific details of soil conditions at the site and the proposed types of foundation design are not known. It is recommended that a thorough soil investigation, including boreholes and laboratory testing of soil samples, be conducted at the site by a California-licensed soils engineer.

Project construction would remove the existing surface covers (houses, asphalt and gravel) from the site, exposing soil to rainsplash, sheetflow, gully (small channel created by water running in soil on a bare slope) and wind erosion. Because the site is surrounded by urban development, eroded soil could be washed onto local streets and into gutters and storm drains and eventually to San Francisco Bay. Possible impacts include nuisance to motorists and clogging of storm drainage facilities and increased sediment load in receiving waters. Because the site is nearly level, soil erosion is unlikely to be a major hazard and could be mitigated through implementation of an erosion control plan. Such a plan should be developed for the site by the project civil engineer and implemented during construction. After construction is complete, portions of the site not covered by buildings or pavement would be vegetated and the potential for soil erosion would be low.

Seismic Hazards

The project would be subject to strong groundshaking during a major earthquake on the San Andreas, Hayward or Calaveras faults. If the project is designed and constructed in conformance with the life and seismic safety standards of the Uniform Building Code, collapse of buildings or major structural damage would be unlikely. However, non-structural damage, such as collapse of suspended ceilings, overturning of furniture and falling of light fixtures or wall hangings could occur and would be a hazard to project occupants.

Additionally, utility service could be disrupted by breaking of electrical, gas, water and sewage lines, thereby hindering emergency response. The project, being a critical facility, would have secondary generators and other systems to provide emergency utility service. To assure that the project employees are prepared to operate standby equipment and to implement emergency procedures, an emergency response plan should be prepared and practiced through periodic drills. Project design should include a designated area away from buildings and overhead utility lines where project occupants could be temporarily moved, should building evacuation be necessary.

Secondary seismic hazards, other than possible dam failure inundation, would not be likely at the site. Failure of the Lake Temescal dam could result in release of the lake water into Temescal Creek about two and one-half miles upstream from the site. Flooding from such an event could cause damage to structures near the creek downstream from the lake. The site is about 600 feet from the Creek and could be subject to inundation. Potential effects of flooding would be less severe for the project than for the existing hospital buildings, which are closer to the creek. This is not considered a significant impact.

MITIGATION

Measures Identified in this Report:

- To evaluate soil conditions and provide input into foundation design, a soil investigation for the proposed site should be prepared by a California-licensed soils engineer.
- To reduce the amount of earth movement, excavation and filling could be balanced to the extent feasible and on-site excavated soils should be re-used on site as feasible. All haul trucks leaving the site should be covered.
- To minimize soil erosion, an erosion control plan could be developed by the project civil engineer. In addition, requirements of the City of Oakland grading and erosion and sedimentation control ordinances should be implemented. The following guidelines could be incorporated into the plan:
 - Remove surface cover from soil only when construction is ready to begin; uncover soil only at potential construction site; and leave covered at areas not proposed for development.
 - Undertake grading during the Summer dry season (May to September).
 - Erect berms or hay bale barriers to direct runoff away from cleared areas .
 - Revegetate cleared areas prior to the onset of winter rains.
 - Cover stockpiles of soil.

IV. Environmental Setting, Impacts and Mitigation Measures

- To reduce seismic hazards, design and construct buildings in conformance with the seismic and life safety standards of the Uniform Building Code. Securely fasten shelves, wall hangings and suspended ceilings to the building structure.
- To increase emergency preparedness, develop an emergency response plan and conduct periodic drills for project staff. Designate a safe outdoor-area for evacuation of people from project structures, if necessary.

NOTES - Geology, Soils, and Seismicity

- /1/ U.S. Geological Survey, Oakland West (topographic) Quadrangle, 1968.
- /2/ California Division of Mines and Geology, Geologic Map of California, San Francisco Sheet, 1961.
- /3/ U.S. Soil Conservation Service, Soil Survey of Alameda County, California, Western Part, March 1981.
- /4/ Kaldveer Associates, Foundation Investigation, Family Center, Children's Hospital of Oakland, Oakland, California, April 15, 1986.
- /5/ Charles W. Jennings, Fault Map of California, California Division of Mines and Geology Data Map, Number 1, 1975.
- /6/ Roger W. Greensfelder, Maximum Credible Rock Acceleration from Earthquake in California, California Division of Mines and Geology Map Sheet 23, 1974.

G. HYDROLOGY

SETTING

Drainage Patterns

The site is located on the lower portion of the alluvial fan emanating from the Berkeley Hills and terminating at San Francisco Bay. In its natural state, the site drained into Temescal Creek, about 600 feet south of the site. Temescal Creek arises at an elevation of about 750 feet above mean sea level (msl) southwest of Round Top, a prominent knoll of the Berkeley Hills, and discharged into San Francisco Bay at Emeryville. However, the creek course has been extensively altered by urban development in Oakland and Emeryville./1/ For substantial portions of its length, Temescal Creek is channelized or confined to underground pipes. South of the site, where it crosses under State Route (SR) 24 and Martin Luther King Jr. Way, Temescal Creek is contained in a 12-foot by 10-foot culvert.

In the vicinity of the site, drainage is confined by gutters and street curbs and is removed by storm drains. Drainage improvements serving the site include a 24-inch diameter storm drain under Dover Street and a 12-inch storm drain under 52nd Street; both of which empty into Temescal Creek south or southwest of the site.

Runoff Volumes

Mean annual rainfall at the site is estimated at 20 inches. Based on impervious surface cover of 60% of the existing site, the runoff coefficient varies from 0.575 during the two-year storm to 0.925 during the 100-year storm. Peak runoff from the site is estimated at 1.4 cubic feet per second (cfs) during the two-year storm, and 4.7 cfs during the 100-year storm. Runoff from the site flows into both the Dover and 52nd Street storm drains. Because of the general slope gradient towards the west, most site runoff probably ends up in the 52nd Street drain.

Flooding

The site is not subject to 100-year flood of Temescal Creek, which affects a relatively narrow 100-foot corridor adjacent to the creek channel.^{/3/} Shallow local ponding of runoff may occur at the site and on streets in the vicinity after major rainstorms. Flooding hazards at the existing site are minor.

Surface Runoff Quality

Surface runoff from the site undoubtedly contains urban pollutants. Residential uses at the site generate litter, herbicides, pesticides and probably fertilizers from lawns. The parking lot generates automobile related pollutants such as oil, grease, metals and rubber. These urban contaminants reduce the quality of surface runoff water, but because of the low density of uses, site runoff is not degraded more than runoff from nearby areas. The urban contamination affecting site runoff is not unusual.

Groundwater

Based on boreholes drilled within 75 feet of the site during April 1986, the water table occurs at about 6 to 13.5 feet below the surface. Seasonal fluctuations are expected and the depth to water probably increases during the summer dry period. Shallow groundwater is derived from surface infiltration of rainfall and runoff and is expected to be contaminated with urban pollutants as described above.^{/4/}

IMPACT

Runoff Rates

The project would remove existing impervious surfaces, including houses, asphalt and concrete from the site and would construct a larger amount of impervious surfaces. It is estimated that about 70% of the site area would be impervious after project development. Because of the small increase in impervious surfaces, peak runoff flows from the site would increase slightly. During the two-year storm, the peak runoff rate would increase from 1.4 cfs to 1.5 cfs. During the 100-year storm, peak runoff would increase from 4.7 to 4.8 cfs.

Drainage Patterns

Drainage plans for the project have not been prepared, and it is not known what drainage improvements would be constructed as part of the project. However, the existing storm drains under Dover and 52nd Streets would not be directly affected by project construction and could continue to serve the site. It is likely that as part of project development, the installation of drainage facilities would occur. Should that occur, those facilities would probably be connected to either or both of the existing storm drains.

Flooding Hazards

The project site is not within an 100-year floodplain and would not be subject to flood hazards, during high flow of Temescal Creek. It is unlikely that increased runoff rates from the site would exceed the capacity of existing storm drains. Because drainage plans for the project are not available, it is not known if the site would drain into the Dover and/or the 52nd Street storm drains. Consequently, project effects on the functioning of those facilities cannot be accurately projected. Should the capacity of either facility be exceeded by runoff rates, localized accumulation of runoff could be a nuisance to motorists or pedestrians. Given the peak rate of runoff flows calculated, substantial flooding would be unlikely.

Water Quality

During project construction, impervious surfaces and vegetation would be removed from the site, exposing soil to rainsplash, sheetflow, gully and wind erosion (see Section G Geology, Soils, and Seismicity above). Soil eroded from the site would be washed onto local roads and

into drain inlets. Drainage facilities could become clogged with sediment, reducing their capacity to transport runoff water. Additionally, soil erosion at the site would increase the turbidity of runoff. Turbid runoff would flow into Temescal Creek, increasing the turbidity of the creek water. These impacts could be effectively mitigated by implementation of erosion control measures during construction. After construction is finished, the site would be mostly covered with buildings and pavement and undeveloped areas would be revegetated, reducing the potential for soil erosion to low levels.

The project would generate urban pollutants, as currently occurs at the site. Because the intensity of proposed development would be greater than at the existing site, the amount of pollutants produced would be greater. The parking garage, in particular, would produce relatively large amounts of oil, grease, metals and rubber from vehicles. Those pollutants would lower the quality of site runoff, which would not be a significant impact. Installation of grease traps on drain inlets and manholes receiving site runoff could improve the quality of runoff. Those traps would require periodic cleaning to maintain their effectiveness.

Groundwater

The depth of excavations required for project construction is not known because foundation design for structures has not been completed. No substantial structures are proposed and no deep excavations would be expected. Excavations to remove pavement, deleterious material and existing foundations from the site could be several feet in depth. Trenches for installation of subsurface utilities would be of similar depth. Groundwater occurs at shallow depth at the site and excavations for construction could require dewatering. Possible methods of dewatering including shallow wells or pumping from a sump dug at the site. Dewatering would temporarily lower the water table to the level of the deepest excavation or slightly below. No significant impacts are expected. Groundwater removed from the site would probably be discharged into nearby gutters or drain inlets.

The project would result in covering of the site with impervious surfaces, increasing storm runoff as described above. Water pollutants generated at the site would be transported by runoff to storm drains, reducing the likelihood of groundwater contamination.

MITIGATION

- To provide adequate storm drainage for the project, drainage facilities would be designed by a California-licensed Civil Engineer in conformance with City of Oakland design standards. Construct drain inlets and subsurface storm sewers at the site and connected them to either the existing 52nd or Dover Street storm drains. Based on the design of project facilities, the project civil engineer would submit to the City for review calculations investigating the adequacy of existing storm drains to accommodate projected peak flows from the developed site.
- To reduce sediment production during construction, an erosion control plan could be prepared by the project soils engineer and implemented.
- To reduce oil and grease concentrations in site runoff, especially from the parking garage, install grease traps on drain inlets and manholes at the site. Those traps must be cleaned periodically by hospital staff to be effective.
- To reduce the amount of dewatering, site preparation and grading could occur during the summer dry season (May to October) if feasible.

NOTES - Hydrology

- /1/ U.S. Geological Survey, Oakland East and West Quadrangles, 7.5 minute series, 1968.
- /2/ City of Oakland Storm Drainage Maps, obtained from City of Oakland Department of Public Works, June 28, 1988.
- /3/ Federal Emergency Management Agency, Flood Insurance Rate Map, City of Oakland, California, September 30, 1982.
- /4/ Kaldveer Associates, Foundation Investigation, Family Center, Children's Hospital of Oakland, Oakland, California, April 15, 1986.

H. PUBLIC SERVICES AND UTILITIES

POLICE PROTECTION/1/

Setting

The Oakland Police Department provides preventive patrol and emergency response services 24 hours a day from the Hall of Justice, at 455 Seventh Street at Broadway, in downtown Oakland. The Department's Patrol Division operates in five separate districts within the City. Children's Hospital and the project site are in District 2, which is served by automobile patrol.

District 2 is divided into seven patrol beats, with one officer assigned to provide coverage for each beat. The maximum patrol coverage in District 2 is between 2:30 p.m. and 12:30 a.m. After 6 p.m., a total of about 11 officers provide coverage in District 2; one sergeant and one technician also provide assistance to beat patrols.

The Hospital also uses the services of private, contract security company. Security patrol operates 24 hours per day in three separate eight-hour shifts, with one security officer on patrol duty during each shift. Regular security patrol, by automobile, covers the area bounded approximately by 55th Street on the north, 51st Street on the south, Dover Street or Highway 24 to the east, and within one block west of Martin Luther King Jr. Way.

Impact/1/

The Oakland Police Department anticipates a minimal increase in demand for police services resulting from development of the proposed project. Operation of the proposed Ambulatory Services Center and, to a lesser extent operation of the expanded Family Center would result in an increase in the patient population in the Hospital vicinity. The increased patient population could increase the demand for police service calls, particularly for assistance related to personal injury or auto break-ins. Development of the proposed 800-space parking garage on-site could reduce the overall number of autos parked by Hospital visitors and employees along streets in the surrounding neighborhood, thereby potentially resulting in the same number or fewer auto break-in calls to police from visitors and employees.

Children's Hospital utilizes the services of a private security patrol service. The security service operates 24-hours per day, patrolling the Hospital campus and area between Hospital facilities via foot and automobile. Non-emergency security patrol services for the proposed project would be conducted by the Hospital's security patrol service, operating 24-hours per day in three separate eight-hour shifts.

The Oakland Police Department has indicated that in addition to responding to the majority of security needs on the Hospital campus, the Hospital's security service has also assisted the Department in prevention of off-campus criminal activity in the surrounding area.

The Oakland Police Department does not anticipate a need for additional personnel or equipment as a result of any increase in calls for service due to the proposed project. The Department anticipates an increase of one to two minutes in the emergency response time to areas east and west of the Hospital as a result of the proposed closure of 52nd Street to motor vehicle traffic. This would be a significant impact of the proposed project. Additional vehicle movement around the site resulting from increased patient visits is expected to have minimal impact to traffic control services.

Emergency response police vehicles would be primarily diverted to 55th Street, as a result of the proposed closure of the 52nd Street right-of-way, when access is required between areas on either side of Highway 24. The Police Department anticipates that the 55th Street route will entail an increase of one to two minutes in the emergency response time over current 52nd Street route, because of slower traffic movement on 55th Street, and a greater number of turning movements required on the 55th Street route.

The increase in police emergency response times may be considered an unavoidable significant adverse impact of the proposed project, in that feasible mitigation would require keeping 52nd Street open to emergency vehicle traffic, and would therefore require development of one of the alternatives (such as Alternative F) instead of the proposed project.

MITIGATION

Measures Identified in this Report:

- The Oakland City Planning Commission could approve an alternative to the proposed project, such as Alternative E or F, that would retain 52nd Street as a public right-of-way open to vehicular traffic. This would fully mitigate effects of new development on the project site on emergency response times of the Oakland Police Department.
- The project site and building plans could be reviewed and approved by the Oakland Police Department as part of the project approval process, to ensure that adequate site and building access is available for emergency response services.
- The Oakland Police Department could be given an access code for security gates to the parking garage, and for any building entrance doors that would be locked during normal operating hours, to allow emergency and non-emergency access to the project.

FIRE PROTECTION/2/

Setting

The Oakland Fire Department provides fire protection services to the vicinity of Children's Hospital and the project site from Engine 8 (Fire Station 8) at 465 51st Street, near the intersection of 51st Street and Telegraph Avenue. The Oakland Fire Department currently has an emergency response time of three minutes, giving the Department a Class 2-A response rating, the highest rating possible. Emergency response time to the Hospital and the project site from Station 8 is currently less than three minutes. Children's Hospital is a designated "Target Hazard" by the Fire Department, meaning that special fire hazards are associated with the Hospital and that special fire fighting techniques would be required to fight any fire occurring there.

Impact/2/

Design of the new Ambulatory Services Center will include all applicable fire protection measures required, including an internal automatic sprinkler system and standpipes, fire-resistant construction techniques and materials in floors, walls, and elevator shafts, fire alarms on all floors, appropriately-located smoke detectors and an emergency generator for back-up operation of all fire safety systems.

Operation of the project would not be expected to have significant effect on existing fire protection personnel and equipment. However, closure of 52nd Street to motor vehicle traffic would have an impact on emergency response times from Station 8 to areas west of Children's Hospital, because 52nd Street is currently used by Station 8 as a primary emergency response route. Emergency vehicles would use either 45th Street, 54th Street or 55th Street to pass under Highway 24, adding an average of one to two minutes to response times. This would be a significant impact of the proposed project.

The Fire Department has indicated that water supply for fire suppression is adequate in the Hospital vicinity. However, the Department has also indicated that provision of a fire hydrant on the project site, or in the vicinity of the site, could be required in order to ensure adequate fire suppression capabilities for the proposed project and adjacent structures.

- Plans have been proposed to relocate various engine and truck companies, which could effect fire services to the project site and vicinity. As of August 1989, no plans for relocations have been finalized.

MITIGATION

Measures Identified in this Report:

- The Oakland City Planning Commission could approve an alternative to the proposed project, such as Alternative E or F, that would retain 52nd Street as a public right-of-way open to vehicular traffic. This would fully mitigate effects of new development on the project site on emergency response times of the Oakland Fire Department.
- The project site and building plans could be reviewed and approved by the Oakland Fire Department as part of the project approval process, to ensure adequate fire prevention equipment and access available for emergency fire fighting and to ensure that all applicable requirements of the Uniform Building Code are met.
- The Oakland Fire Department could be given an access code for security gates to the parking garage, and for any building entrance doors that would be locked during normal operating hours, to allow emergency and non-emergency access to the project.

WATER SUPPLY

Setting/3/

The East Bay Municipal Utility District (EBMUD) provides domestic water supply to the City of Oakland. Water supply for the City originates in the Sierra Nevada mountains, and is initially stored at the Pardee Reservoir on the Mokelumne River. The Pardee Reservoir has a capacity of 209,900-acre-feet of water. EBMUD distributes domestic water to the project site and vicinity, including Children's Hospital, via the infrastructure of the Claremont Pressure Zone. The Claremont Reservoir provides water storage for the Pressure Zone, and has a capacity of about 8.1 million gallons.

Water supply is distributed to the project site via a series of subsurface distribution lines. An underground eight-inch diameter pipeline at 52nd Street, adjacent to the project site, distributes water supply to the site and to the Hospital; this pipeline continues eastward underneath Highway 24 to serve the area immediately east of Highway 24. Two cast-iron six-inch diameter pipelines also serve the site; one is underneath 53rd Street (installed in 1934), and one is underneath Dover Street (installed in 1910), adjacent to the project site.

Fire service supply is provided to two locations adjacent to the project site; a six-inch service at Martin Luther King Jr. Way, and a four-inch service at 52nd Street.

Impact

Operation of the proposed project would result in an estimated demand for about 10,120 gallons of water per day./4/ According to EBMUD, the six-inch supply main at Dover Street and the six-inch main on 53rd Street may have to be replaced in order to ensure continuous water supply to the project in the event that one of the mains were to fail. In addition, new pressure zones may be required.

The EBMUD anticipates that new eight-inch mains would probably be required to serve domestic supply and fire suppression demands from the project. EBMUD would require underground installation of the domestic supply main at 52nd Street, within the proposed right-of-way vacation. EBMUD would also require that a right-of-way be dedicated on that portion of 52nd Street, whether or not a new supply main is installed, for emergency repair access./3/

The Claremont Reservoir (which supplies the site and vicinity) has an 8.1 million gallons capacity which is fed through the control station. The zone has the capacity to meet the project's demand and expected cumulative demand from new development in the Service Zone./3/

MITIGATION

Identified in this Report:

Recommendations of the State Department of Water Resources for reducing water consumption, and thereby reducing generation of wastewater, include:

Exterior Areas of Project Site:

- Landscape with low-water-using plants wherever feasible.
- Group plants of similar water use to reduce overirrigation of low-water-using plants.
- Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.
- Preserve and protect existing trees and shrubs, as feasible. Established plants are often adapted to low-water-using conditions and their use saves water needed to establish replacement vegetation.
- Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors, and automatic irrigation systems are a few methods of increasing irrigation efficiency.

- Use pervious paving material whenever feasible to reduce surface water runoff and to aid in groundwater recharge.
- Investigate the feasibility of using reclaimed wastewater, stored rainwater, or grey water for irrigation.
- Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids groundwater recharge.

Interior of Project Structures:

- Supply line pressure: Water pressure greater than 50 lbs per square inch (psi) be reduced to 50 psi or less my means of a pressure-reducing valve.
- Drinking foundations: Drinking fountains be equipped with self-closing valves.
- Laundry facilities: Water-conserving models of washers be used.
- Ultra-low-flush toilets: Install one-and-one-half-gallon per flush toilets in all new construction.

SANITARY SEWER

Setting

The City of Oakland maintains and operates the subsurface sanitary sewer system which carries wastewater from the Hospital vicinity Sub-area to wastewater treatment facilities operated by EBMUD. EBMUD's Special Sewage Treatment Utilities District No. 1 (SDI) was established in 1944 to provide treatment and disposal of sanitary and industrial wastewater. The upgrading of the SDI Water Pollution Control treatment plant in 1977 resulted in a capacity for primary treatment of 290 million gallons per day (mgd), and secondary treatment capacity of 168 mgd. Actual recent treatment flows from Oakland, Alameda, Berkeley, El Cerrito, Emeryville, Kensington, Piedmont, and Richmond Annex combined have averaged about 80 mgd of dry weather flow. Peak wet weather treatment flows from these sources have far exceeded 290 mgd (treatment capacity)./5/

The City of Oakland, in cooperation with six other East Bay communities which discharge sewage into EBMUD's treatment facilities, has completed a study of strategies for reducing or eliminating stormwater inflow into the wastewater system. The study recommendations include strategies for reduction of inflow from normal sewage disposal in Oakland. Construction of the 20-year program for implementing improvements to existing sewage systems in Oakland is

planned to commence in the near future. Improvements to the system will entail either development of parallel relief lines to supplement capacities of existing lines, or replacement of existing lines where groundwater is entering through system leaks./6/

The wastewater treated at the SDI treatment plant meets federal and state regulations regarding wastewater quality and disposal. Treated effluent is discharged from the treatment plant into the Bay near Yerba Buena Island via a three-mile-long outfall line. The outfall is gravity-fed, except during high tides and/or high flow, when the outfall is pumped into the Bay./5/

Wastewater generated in the Children's Hospital and project site vicinity is collected via a 14-inch diameter underground trunk collection main, running westerly along 52nd Street, and an eight-inch diameter collection main running westerly along 52rd Street. A downstream collection main underground at West Street collects wastewater from the mains at 52nd and 53rd Streets, and subsequently connects to an underground main system at 45th Street, Market Street, and 36th Street, and to an underground main at Peralta Street. Wastewater is then transported to the interceptor treatment facility via an EBMUD 78-inch diameter underground collection main at 34th Street./6/

Impact

Operation of the project would generate an estimated 9,110 gallons per day of wastewater flow into the SDI No. 1 treatment facility./7/ It is estimated that the project would result in an average daytime flow of 19 gallons per minute (gpm), based on a daily flow period of eight hours./8/ The existing capacity of the 52nd Street, 53rd Street and West Street sewage mains are adequate to accommodate project-generated wastewater. The 20-year program for improvement of the collection system proposes improvements to the collection mains at 36th Street, Peralta Street and 34th Street resulting in upgrading of capacities in order to accommodate cumulative wastewater generation in the area./5/ A specific timetable for these improvements has not been developed.

Daily wastewater generation from operation of the proposed project would comprise less than 0.004% of the SDI No. 1 facilities' primary treatment capacity.

Mitigation

See measures identified in this report, on pages 162-163.

SOLID WASTE

Setting^{9/}

The Oakland Scavenger Company, under contract with the City of Oakland, provides solid waste disposal service for all of the City of Oakland. The company's service area also includes most of Alameda County, and thereby serves a total population of about 1,000,000.

The Oakland Scavenger Company transports solid waste from the County to two landfill sites. The site at Durham Road in Fremont receives wastes from the southern portion of the County; solid waste from the northern portion of the County, including the City of Oakland, is deposited at Altamont.

Solid waste is transported from the City of Oakland to the Davis Street Transfer Station in San Leandro, and from there to the 1,600-acre landfill site at Altamont, about 33 miles southeast of Oakland. The Altamont landfill site is owned by the Oakland Scavenger Company, and has an estimated remaining lifetime of 40 to 50 years.

About 3,500 tons of solid refuse per day is currently hauled by Oakland Scavenger Company from northern Alameda County to the Altamont site. The amount of solid waste collected County-wide and hauled to the landfill sites is projected to increase by between about two and three percent (70-105 tons) per year.

Programs for recycling of solid waste have been instituted in the City of Oakland by government agencies, and non-profit and for-profit corporations. The Oakland Scavenger Company operates a newspaper recycling program in Oakland, with pickup services free of charge.

Impact

The project would generate an estimated 8,324 pounds (lbs.) per day of solid waste.^{10/} Solid waste generated by project operation is not anticipated to include any hazardous materials. Oakland Scavenger Company has stated that operation of the proposed project would not significantly affect solid waste disposal services in Oakland, nor would it affect the estimated lifetime of the Altamont Landfill site.

Mitigation

None required.

COMMUNICATIONS/11/

Setting

Pacific Bell provides communication (telephone) services to the Hospital, project site, and vicinity. Existing communication facilities in the site vicinity are pole-mounted aerial lines. The project site and existing Hospital are served by aerial lines along 52nd Street, along the right-of-way that comprises a part of the proposed project site.

Impact

Communication connections to the project would be provided underground along the pedestrian atrium at 52nd Street. Pacific Bell has indicated that there would be no constraints to providing service to the project, if an easement for emergency repair access is provided along the vacated 52nd Street right-of-way. Underground installation of new service cable could jointly trench with new service connections of PG&E.

Mitigation

None required.

NOTES - Public Services and Utilities

- /1/ Sergeant Dennis Shinn, Administrative Assistant, Oakland Police Department, Chief of Police's Office, telephone conversation, July 15, 1988. Lieutenant Fred Peoples, Oakland Police Department, telephone conversation, June 26, 1989.
- /2/ Jerry Blueford, Fire Marshall, Oakland Fire Department, telephone conversation, July 15, 1988 and June 26, 1989.
- /3/ John Chong, Civil Engineering Assistant, East Bay Municipal Utility District, telephone conversation, July 25, 1988.
- /4/ Water demand estimates are based on the anticipated number of patients annually to the project and Emergency in 1995, after full project build-out (113,500), divided by 260 days per year, plus project staff (about 125); and standard water demand rates for Hospital facilities from Economic Practices Manual, Office of Planning and Research, April 1984.

- /5/ Leo O'Brien, Senior Civil Engineer, East Bay Municipal Utility District, telephone conversations, June 20, 1988 and June 23, 1989.
- /6/ Gus Amirzehni, Engineer, Oakland Department of Public Works, Engineering Design, telephone conversations, August 18, 1988 and June 28, 1989.
- /7/ Wastewater generation estimates are based on 90% of the estimated daily water supply demand.
- /8/ 9,110 gallons per day divided by eight-hours (daily generation period) equals 1,139 gallons, divided by 60 minutes per hour equals 18.98 gallons per minute flow.
- /9/ Michael Crosetti, Manager, Oakland Scavenger Company, telephone conversations, August 16, 1988 and June 26, 1989.
- /10/ Estimates of solid waste generation are based on a factor of one pound of waste per day per ten square feet of net new (excluding the parking garage) building area (83,240 sq. ft.).
- /11/ Billy Simms, Engineer, Building Industry Consultant, Pacific Bell, telephone conversation, July 22, 1988.

I. ENERGY

SETTING

Electricity and Natural Gas

Pacific Gas and Electricity Company (PG&E) supplies electricity and natural gas to Children's Hospital and the project area. PG&E's service area covers 94,000 square miles in northern and central California, includes 48 of California's 58 counties, and has a population of more than 10 million people. PG&E serves nearly four million electric customers and about 3.2 million natural gas customers.

PG&E supplied about 67 billion kilowatt-hours (kWh) of electricity to its customers in 1987./1/ That power was produced by a diverse generating system which includes hydroelectric, fossil fuel, nuclear, geothermal, wind, and solar facilities. PG&E met the 1987 peak electrical demand of 16.2 million kilowatts (kW) with a reserve margin (the amount of available capacity over peak demand) of 19.3%.

PG&E supplied about 425 billion cubic feet of natural gas to its customers in 1987./1/ Slightly over half was obtained from Canada; the remainder came from California and southwestern U.S. sources. PG&E's peak-day sendout for natural gas in 1987 was about 3.5 billion cubic feet.

Electricity is distributed to Children's Hospital and the surrounding area through PG&E's substation at 52nd Street and Shattuck Avenue via above-ground transmission lines. Natural gas is distributed via an underground system of supply mains. There is a 12-kilovolt (kv) above-ground electrical transmission line and an eight-inch underground gas line along 52nd Street, between the existing Hospital campus and the project site.

Energy Efficiency Standards

The energy consumption of the new buildings in California is regulated by the State Building Energy Efficiency Standards, embodied in Title 24 of the California Administrative Code./2/

The efficiency standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process.

Compliance with Title 24 can be achieved through either a "performance" or a "prescriptive" approach. In the performance compliance approach, a building must be designed to consume no more energy than specified in the appropriate energy "budget." The energy budget is based on the building type and size, and the climatic zone in which it is located. In the prescriptive compliance approach, a building must comply with design requirements which have been determined to achieve building designs which meet the applicable energy budgets. In this approach, the builder can choose from a variety of alternative component packages which specify features such as insulation, glazing, lighting, shading, and water and space heating systems. In both cases, there are also certain mandatory prescriptive requirements that must be fulfilled.

IMPACT

Construction of the project would require an initial investment in energy. Building operation and project-related motor vehicle trips would consume energy throughout the life of the project.

Construction

Construction would require both direct and indirect expenditures of energy. Direct energy is directly consumed by an activity. For example, the refined petroleum products needed to operate construction equipment would be a direct energy expenditure. Indirect energy is consumed through sectors that provide inputs to an activity, rather than energy consumed by the activity itself. For example, the use of a steel beam in construction indirectly represents energy consumed in all of the industries that contributed to the production of the beam (e.g., energy consumed through mining and extraction of raw materials, manufacturing, and transportation). Indirect energy typically represents about three-quarters of total construction energy, while direct energy represents about one-quarter of total construction energy.^{/3/}

Construction of the 80,000-square-foot outpatient clinic and the 22,000-square-foot Family Center expansion would require about 180 billion Btu.^{/4,5/} Construction of the 260,000-square-foot parking structure would require about 200 billion Btu.^{/6/} Total construction energy consumption (380 billion Btu) would be equivalent to the energy content of about 66,000 barrels of crude oil.

Building Operations

No detailed information on the projected energy consumption of the proposed project is yet available; however, energy consumption can be estimated on the basis of energy consumption factors derived from similar facilities.

About 80,000 square feet of outpatient clinic space and 22,000-square-feet of family services and facilities would replace about 16,600 square feet of existing clinic space for a net increase of about 85,400 square feet. The increase in building space would increase energy consumption by about 1.5 million kWh of electricity per year and 9.6 million cubic feet of natural gas per year.^{/7/} The 260,000-square-foot parking structure would consume about 520,000 kWh of electricity per year for lighting, ventilation, and elevators.^{/8/} Total building energy consumption would be about 31 billion Btu per year, equivalent to about 5,300 barrels of crude oil per year. By comparison, the average annual energy consumption of a single-family residence is 0.13 billion Btu, or 22 barrels of crude oil.^{/1/}

The Title 24 Building Energy Efficient Standards would not apply to the project. Hospital facilities are exempt from the standards. Title 24 applies only to conditioned floor area, so the parking structure would not be subject to the standards either.

Energy Infrastructures

Without detailed building plans and electrical load forecasts, it is not possible to determine specific infrastructure improvements required by the project. It is likely, however, that the project will require an additional transformer at the site./9/ Existing electric and natural gas distribution facilities would be sufficient to serve the project./9/ Project energy consumption would be very small compared to electrical and natural gas consumption in PG&E's service area (less than 0.01%) and would have no impact on PG&E's capacity.

The project would affect existing electric lines and natural gas mains along the 52nd Street right-of-way. With development of the project and the closing of 52nd Street, the existing 12-kv electric line would have to be placed underground./10/ Depending on final project design, the eight-inch underground gas line along 52nd Street might have to be relocated. The gas line would have to be relocated if excavation along 52nd Street were involved, or if an enclosed atrium were to be placed above the line./10/

Transportation Energy

The transportation analysis projects 1,252 vehicle trips per day with an average trip length of 10.4 miles. Energy consumed by that motor vehicle travel would total about 161,000 gallons of fuel per year./11/ Most of the fuel would be gasoline; about 13% would be diesel fuel. Transportation energy consumption would total about 23 billion Btu per year, equivalent to about 4,000 barrels of crude oil per year.

MITIGATION

- Transportation-related energy consumption could be reduced through car-pooling or other Transportation Systems Management (TSM) measures identified in the Transportation Section.
- Building energy consumption could be reduced through various energy-efficient design measures, such as:
 - o Reduce lighting (including task lighting, daylighting, and automatic lighting controls);

- o Electrical load management;
- o Energy management and control systems; and
- o Alternative energy systems (such as cogeneration and solar energy).

NOTES - Energy

- /1/ Pacific Gas and Electric Company, 1988, 1987 Annual Report.
- /2/ The State Building Energy Efficiency Standards are contained in the California Administrative Code, Title 24, Part 2, Chapter 2-53. Enforcement of Title 24 standards is addressed in the California Administrative Code, Title 20, Chapter 2, Subchapter 4, Article 1.
- /3/ Hannon, B., et al., 1978, "Energy and Labor in the Construction Sector," Science 202: 837-847.
- /4/ British thermal units (Btu) are units of heat energy. One Btu is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit. All forms of energy can be converted to heat energy. Btu values used in this analysis are "at-source" values, which means that energy is included as well as the actual energy content. For example, the at-source energy value of electricity includes losses in energy that occur during the generation and transmission of electricity, and the at-source energy value of gasoline includes energy consumed through extraction, refining, and transportation of the fuel.
- /5/ Based on a construction energy consumption factor of 1,720,000 Btu/square foot from Hannon, et al.
- /6/ Based on a construction energy consumption factor of 770,000 Btu/square foot from Hannon, et al.
- /7/ Based on consumption factors of 18 kWh of electricity per square foot per year and 112 cubic feet of natural gas per square foot per year. Factors are based on data from the California Energy Commission (Hoang Dang Nguyen, Research Economist, April 24, 1987).
- /8/ Based on a consumption factor for parking structures of about two kWh per square per year.
- /9/ Mike Scott, Industrial Power Engineer, Pacific Gas and Electricity Company, telephone conversation, August 19, 1988.
- /10/ Phillip Chan, Service Planner, Pacific Gas and Electric Company, telephone conversation, August 18, 1988.
- /11/ Based on a projected fuel consumption rate in 1995 of 29.6 miles per gallon from Caltrans, 1983, Energy and Transportation Systems, Report No. FHWA/CA/TL-83/08.

V. UNAVOIDABLE SIGNIFICANT ADVERSE EFFECTS

Following is a summary of significant adverse environmental effects of the proposed project which cannot be mitigated to less than significant levels.

LAND USE (pp. 49 to 51)

Development of the proposed project would displace 23 single-family residential structures on the site with new, relatively high-intensity medical and related parking uses. Nine of these residences are under private ownership. The proposed development would complete the total replacement of residential uses with Hospital-related uses on the portion of the site west of Dover Street, which was begun in the 1970s. The northward expansion of Hospital uses into a low-density residential area and displacement of existing stock would be an unavoidable adverse effect of the project.

TRANSPORTATION, CIRCULATION AND PARKING (pp. 99 to 110)

Closure of 52nd Street through the project site could divert about 4,600 daily vehicles to 55th Street; about 1,500 daily vehicles could be diverted to 45th Street. About 310 daily vehicle trips to and from the immediate project vicinity would be diverted to alternate routes.

Traffic generated by the project, and alteration in the local traffic circulation pattern resulting from closure of 52nd Street, would increase daily traffic volumes on 55th Street between Shattuck Avenue and Martin Luther King Jr. Way from about 5,500 to about 10,100 daily vehicles, an 84% increase; on 45th Street between Martin Luther King Jr. Way and Shattuck Avenue from about 2,700 to about 4,700 daily vehicles, a 74% increase; and Shattuck Avenue between 52nd and 55th Streets from about 17,500 to 23,400 daily vehicles, an increase of 34%.

After implementation of measures recommended to improve circulation and therefore levels of service (LOS) at nearby intersections, project generated traffic and alteration in local traffic circulation as a result of the 52nd Street closure would reduce the operating LOS during the PM peak-hour, compared to existing conditions, from "B" to "C" at the Shattuck Avenue / 55th

Street intersection. During the AM peak-hour, compared to existing conditions, the operating LOS would be reduced from "B" to "C" at the Martin Luther King Jr. Way / 47th Street, Martin Luther King Jr. Way / 52nd Street and Shattuck Avenue / 52nd Street intersections, and from "A" to "C" at the Martin Luther King, Jr. Way / 55th Street intersection.

AIR QUALITY (pp. 137 to 140)

Alteration in traffic circulation due to closure of 52nd Street between Martin Luther King, Jr. Way and Dover Street, and project-generated traffic would result in violation of the state eight-hour average CO standard, at the intersection of 55th Street and Shattuck Avenue without implementation of specific mitigation measures; with implementation of the mitigation measures, violation of the state eight-hour average CO standard would occur with cumulative traffic increases in 2000.

PUBLIC SERVICES AND UTILITIES (pp. 157 to 161)

Closure of the 52nd Street right-of-way to motor vehicle traffic would result in an increase of one to two minutes in the emergency response times of the Oakland Police Department and the Oakland Fire Department to points east and west of the proposed project site and the Hospital.

Wastewater generated by operation of the project would add incrementally to cumulative increases in wastewater generated in the site vicinity; the cumulative increases in wastewater generation would have an effect on capacities of existing collection mains at Peralta Street, 36th Street and 34th Street. A 20-year program for required capacity improvements has been developed, although a specific timetable for the improvements has not been finalized. The project could therefore contribute to cumulatively significant impacts if wastewater generation exceeds existing capacities before the planned upgrades are implemented.

VI. SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

The project site is currently committed to urban uses (Hospital activities, residences and parking lots), and has been for the last 60 years, although the types of uses have evolved from exclusively residential to mixed uses. Implementation of the proposed project represents a long-term commitment of the project site to an urban use (Hospital activities), entirely replacing remaining residential uses (also an urban use).

Short-term environmental effects of the proposed project would result from demolition and construction activities, and would include localized increases in ambient noise and vehicular emissions generated by operation of construction equipment, localized increases in airborne dust and sedimentation of drainage systems due to demolition and new construction activities on-site, and consumption of energy resources.

Long-term environmental effects of the proposed project includes an increase in the intensity of urban uses on the site, with an increase of 83,240 gross sq. ft. of floor area devoted to Hospital activities on-site, and an increase of 583 off-street parking spaces, over the area and number of those uses now on the site (closure of 52nd Street would remove 13 on-street parking spaces, resulting in a net increase of 570 spaces with the new parking garage.) The proposed project would result in a long-term displacement of residential uses on the site by a northward expansion of Hospital-related uses across 52nd Street.

The proposed project would result in a long-term alteration of the local traffic circulation in the immediate vicinity. The altered circulation pattern would have a long-term effect on the Oakland Police Department and the Oakland Fire Department, by adding one to two minutes in the response time of emergency vehicles traveling to affected neighborhoods to the east and to the west of the project site. Vehicular traffic generated by the proposed project would add daily trips and p.m. peak-hour trips to local streets and intersections. Alteration in the local circulation pattern would reduce daily and p.m. peak-hour traffic of other local streets and intersections. The entrance and exit configuration of the proposed parking garage would also result in a long-term change in vehicular circulation patterns on street segments in the immediate site vicinity. The added vehicle trips, and altered vehicular circulation patterns, would result in long-term generation and re-distribution of total organic gases, carbon monoxide, and nitrogen

oxides; long-term violation of the state eight-hour average CO standard in 2000, with cumulative traffic increases, would occur at the intersection of 55th Street and Shattuck Avenue with implementation of project mitigation measures. A long-term increase in ambient noise levels on some street segments in the vicinity of the site would also result from the altered traffic circulation. Closure of the 52nd Street right-of-way would also result in the long-term relocation to underground of aerial telephone and electrical transmission lines.

Operation of the project would result in a relatively minimal, though long-term, increase in demand for police protection and fire suppression services, water supply and energy resources, and would result in a long-term increase in generation of wastewater and solid waste. Development of the site would result in a long-term increase in the amount of impervious surfaces on the site, and a resulting long-term increase in the rate and quantity of stormwater runoff from the site.

The proposed project would result in a long-term increase in the visibility of the site from both long-range and short-range viewpoints, as a result of replacing the existing one-story structures with two adjoining four-story and five-story structures. The proposed parking garage and expanded Family Center would result in a long-term alteration in the visual characteristics of the built environment on 53rd Street between Martin Luther King, Jr. Way and Highway 24.

Long-term benefits of the project would include an increase in the available off-street parking supply in the site and Hospital vicinity, thereby reducing demand for on-street parking over the long term. The Ambulatory Services Center would also result in a long-term increase in the availability of outpatient services to residents of the City of Oakland and surrounding area.

VII. IRREVERSIBLE ENVIRONMENTAL CHANGES

Removal of the existing structures on the site, and construction of the proposed project structures, would require the expenditure of non-renewable resources such as fossil fuels. An irreversible commitment of building materials would be made for construction of the project structures, paved traffic circulation and pedestrian open space areas.

Development of an 80,000 gross sq. ft. Ambulatory Services Center, an 800-space parking garage and a 22,000 sq.-ft. Family Center expansion on the site would result in an irreversible commitment of the site to these uses, for the lifetime of the project (about 50 years), and would be irreversible increase in the intensity and density of urban uses on the site over the project lifetime. Replacement of residential structures currently on the site (whether or not now in residential use) with Hospital uses would also result in a reduction in residential land use in the site vicinity for the lifetime of the project. Traffic generated by project operation would add net new trips to local streets and intersections, and would generate additional emissions of total organic gases, carbon monoxide, and nitrogen oxides, irreversibly for the lifetime of the project. Traffic circulation in the area would be irreversibly altered with the closure of the 52nd Street right-of-way, although the right-of-way could be re-opened to vehicular traffic during the lifetime of project operation. Alteration in traffic circulation would also result in an irreversible increase in the ambient noise level on some local street segments, for the lifetime of the project. Closure of 52nd Street to vehicle traffic would irreversibly increase emergency response times of the Oakland Police Department and the Oakland Fire Department. Closure of 52nd Street would irreversibly alter local traffic circulation and would thereby result in violation of the state 24-hour average CO standard at the intersection of 55th Street and Shattuck Avenue, with cumulative traffic increases in 2000, with implementation of project mitigation measures. The project structures would increase the visibility of the site in long-range and short-range views, for the project's lifetime. Views along streets adjacent to the site particularly 53rd Street, would be irreversibly altered for the project's lifetime. Development of the site would result in an irreversible increase in the area of impervious surfaces on the site and in the rate and amount of stormwater runoff from the site into the local storm drainage system. Operation of the project would result in an irreversible consumption of water and energy supplies, and would result in an irreversible generation of wastewater and solid waste.

The proposed project would not, however, necessarily commit future use of the site to the uses currently proposed. The project site could be redeveloped with uses of a different type and intensity to those currently proposed with the project, after the project's useful lifetime (about 50 years) has expired.

VIII. CUMULATIVE EFFECTS

Development of the proposed project on the site would contribute incrementally to impacts resulting from on-going new development in the area. In particular, the proposed project would add about 61,240 gross sq. ft. of space for medical service uses to the project site, would add about 22,000 gross sq. ft. of Family Center space, and would add about 583 off-street parking spaces for Hospital employees and visitors to the area surrounding the project site (closure of 52nd Street would remove 13 on-street parking spaces, resulting in a net increase of 570 spaces). The proposed closure of 52nd Street and resulting re-distribution of local traffic would contribute to a significant cumulative impact on carbon monoxide (CO) levels at the intersection of 55th Street and Shattuck Avenue. The proposed development would increase the intensity of the urban uses in the site vicinity, compared to the existing medical, parking and residential uses on the project site. Removal of existing residential structures on the site, for development of the project, would incrementally decrease (by about one and one-half city blocks) the amount of land historically developed for residential use in the site vicinity and in the city. Removal of existing residential structures on the site could also incrementally decrease the supply of housing units in Oakland if the structures are demolished. The project would add cumulatively to the visibility of the project site area from both long-range and short-range viewpoints. The addition of daily trips and p.m. peak hour trips to local streets and intersections, resulting from traffic generated by operation of the project, would add to the cumulative increase in traffic on certain area streets and intersections. Related increases in the emission of total organic gases, carbon monoxide, and nitrogen oxides would add locally to cumulative increases in vehicular emissions. The increase in ambient noise levels on some street segments in the immediate site vicinity, resulting from traffic generated by operation of the proposed project and from alteration of traffic circulation due to closure of 52nd Street, would add to the cumulative increase in noise levels in the area surrounding the site. Project construction activities would add incrementally to local TSP emissions. The development would increase the amount of impervious surfaces on site, thereby adding cumulatively to increasing amounts of stormwater runoff into the storm drainage system.

Operation of the project would add cumulatively to demand for police protection and fire suppression services, and would add cumulatively to demand for water supply and energy resources. Generation of wastewater and solid waste from project operation would also add to cumulative increases in demand for collection, treatment and disposal services for these wastes.

IX. GROWTH INDUCING IMPACTS

The proposed project would add a total of about 61,240 gross sq. ft. of floor area devoted to Hospital outpatient activities to the project site, would add about 22,000 gross sq. ft. of floor area in the Family Center expansion, and would add a total of about 583 off-street parking spaces for Hospital employees and visitors, after replacing 18,760 gross sq. ft. of floor area used for Hospital activities and 217 off-street parking spaces now on the site (closure of 52nd Street would remove 13 on-street parking spaces resulting in a net increase of 570 spaces). The project would also replace a total of 23 residential structures, nine of which remain in private ownership and in residential use on the site.

The project could have growth-inducing effects by replacing residential uses with medical uses, thereby demonstrating a demand for medical services in the area. This could thereby encourage similar development on lots currently vacant, or on lots currently occupied by relatively low-intensity residential and commercial uses, in the area.

Rezoning of the project site from R-50 (Medium-Density residential) and R-40 (Garden Apartment Residential) to S-1 (Medical Center) could set a precedent for rezoning of other properties in the area, from a relatively low-intensity residential or commercial zone designation to a higher-intensity zone designation for new development of similar or different uses. The Oakland City Planning Commission, in approving or disapproving this project and the associated rezoning and street vacation proposals, will provide direction (and possibly limitations) on future development in the area.

Employment growth would occur at the Hospital as a result of the proposed project. Employment growth resulting from the project would not be likely to be reflected directly in increased demand for new housing and City services to residents, as some of the new jobs would be held by individuals who already live and work in Oakland; who live in Oakland but previously were unemployed, or under-employed, or were employed outside the city; or who were employed in the city but lived outside the city because of choosing to do so or because of being unable to afford or to locate suitable housing in the city.

Increased employment resulting from the project would increase the demand for retail goods and services in the project area. Increases in medical office services employment would also increase demand for medical supply and medical business services, to the extent that activities in the new space would increase demand for firms providing those services.

X. ALTERNATIVES

A. NO-PROJECT ALTERNATIVE

The No-Project Alternative would entail no changes to the project site. The Children's Hospital Ambulatory Services Center and parking facility would not be developed on the site. Expansion of the Family Center would not occur. The existing residential structures and Hospital parking lots on the site would remain. Vacating 52nd Street as a public street would not occur, and the traffic circulation pattern in the site vicinity would be unchanged. A General Plan Amendment would not be required. A zone change for the site from the current R-40 (Garden Apartment Residential) and R-50 (Medium Density Residential) designations to an S-1 designation (Medical Center) would not be required. The environmental impacts resulting from development and operation of the proposed project, described in the environmental impact sections of this document, would not occur at the site and vicinity. The effect of closure of 52nd Street and cumulative traffic increases, resulting in a significant impact on air quality at the intersection of 55th Street and Shattuck Avenue, would not occur under this alternative. The effect on existing residential land use and housing stock on the site would not be likely to occur to the extent as would occur with the proposed project.

This alternative could result in development of the site in the future, with a Hospital-related project or with another type of development. The western portion of the site to the west of Dover Street is occupied primarily by surface parking lots; it is likely that this portion of the site would be developed first in the future, if the entire site were not developed. This alternative could result in the relocation of all or part of the Hospital facilities to another site, probably to a location outside of the City of Oakland (see Alternative B beginning on the next page). A satellite facility could be maintained at the existing Hospital campus, possibly containing only inpatient or only outpatient services.

Children's Hospital has rejected this alternative because it would not allow for the physical expansion of Hospital facilities and would not allow development of additional, off-street parking for Hospital visitors and employees on a site adjacent to the existing Hospital campus. If the Hospital were not to expand as proposed, the consequences could include an inability for the Hospital to compete effectively with other facilities offering comparable services in the Bay Area. This alternative would impair the efficiency, and therefore cost-effectiveness, of the Hospital's services.

B. ALTERNATIVE SITES

Under this alternative, Children's Hospital would develop the proposed Ambulatory Services Center at another site in Oakland. Between 1970 and 1973, the Hospital considered relocating these facilities at a location near other hospitals in the "Pill Hill" area of Oakland, about 1.0 to 1.25 miles south of the existing Hospital campus. The Hospital considered development of a new Ambulatory Services Center on a site adjacent to Peralta Hospital, at Telegraph Avenue and 30th Street. Further evaluation by the Hospital of that program revealed inherent inefficiency in conducting operations at separate locations. In the recent past, the Hospital has also considered the development of needed new facilities in a location outside of Oakland, possibly in the I-580/I-680 Corridor area. Development at an alternative site outside of Oakland would require relocation of all or a majority of Hospital services to that location, because of the inherent inefficiency in conducting operations at separate locations.

Under this alternative, the proposed parking garage would not be developed as proposed on another site, because the additional parking is intended to meet existing demand from the Hospital campus as well as future demand from the proposed Ambulatory Services Center. This alternative could result in a proposal to develop a reduced-scale parking garage, containing about 500 spaces, on a portion of the project site.

Environmental effects on traffic generation, noise, air quality, geology and seismicity, hydrology, energy and public services and utilities associated with operation would occur with this alternative and could be similar to those of the project. Effects on existing residential land use and housing stock would not be likely to occur, as compared to the project, because an alternative site would probably not be selected in an existing residential neighborhood. Effects on traffic circulation resulting from closure of a street right-of-way would not occur as compared to the project, because street closure would probably not be included under this alternative. Effects on the emergency response times of the Oakland Police and Fire Departments, due to closure of 52nd Street, would not occur under this alternative. The significant effect on CO levels at the intersection of 55th Street and Shattuck Avenue, resulting from closure of 52nd Street and project-generated traffic plus cumulative traffic increases in 2000, would not occur under this alternative. Effects associated with construction and operation of the Ambulatory Services Center would also be similar, but would occur at the alternative location. In the site vicinity, environmental effects of the Ambulatory Services Center would not occur. Vehicular traffic between the existing Hospital campus and the site of the Ambulatory Services Center would occur, because of the physical separation of the facilities, and would increase traffic on

roadways between the Hospital Campus and the alternative Services Center site. Effects of construction and operation of the parking garage would occur if the garage were constructed under this alternative, and would be less in the Hospital vicinity than with the proposed project garage, because of the smaller size of the garage constructed under this alternative compared to the project garage. A parking garage would also have to be constructed at the alternative Services Center site to accommodate patient and employee parking.

A zone change and Amendment to the Comprehensive Plan would not be required for the project site, under this alternative. If the parking garage were constructed on a portion of the site, it would be a conditionally permitted activity in both the R-40 and R-50 Zones. Depending on the location of the alternative Ambulatory Services Center site, a zone change and Amendment would or would not be required for the alternative Services Center. This alternative would result in lesser effects on views in the vicinity of the site, because the Ambulatory Services Center would not be constructed. Impacts on views in the vicinity of the alternative site of the Center would be the same or greater than with the project, depending on the topography and existing scale of development in the vicinity of the alternative site location. If a site in the "Pill Hill" area were developed, the Center could be more visually prominent in long-range views because of the relatively high visibility of the "Pill Hill" area, if the alternative site were not in an area of existing relatively high density development.

This alternative was rejected by the Hospital because of the operational inefficiencies that would result from physical separation of Hospital service activities. The option of relocating the Ambulatory Services Center to a site outside of the City of Oakland was rejected by the project sponsors because of the prohibitive operational costs and inherent efficiency involved with relatively great geographic distances between Hospital facilities. Additionally, this option was rejected by the Hospital because it would not meet the Hospitals' objectives of continuing to provide services to Oakland residents.

C. REDUCED-SCALE AMBULATORY SERVICES CENTER

This alternative would consist of an Ambulatory Services Center containing about one-half the floor area of the proposed project, or about 40,000 sq. ft. on two or three levels compared to the five-story, 80,000-sq. ft. Center currently proposed. The proposed parking facility and Family Center expansion would be the same as under the proposed project (see Figure 33). An Amendment to the Comprehensive Plan, and a Zone change, would be required for development of this alternative on the site as required for development of the proposed project.

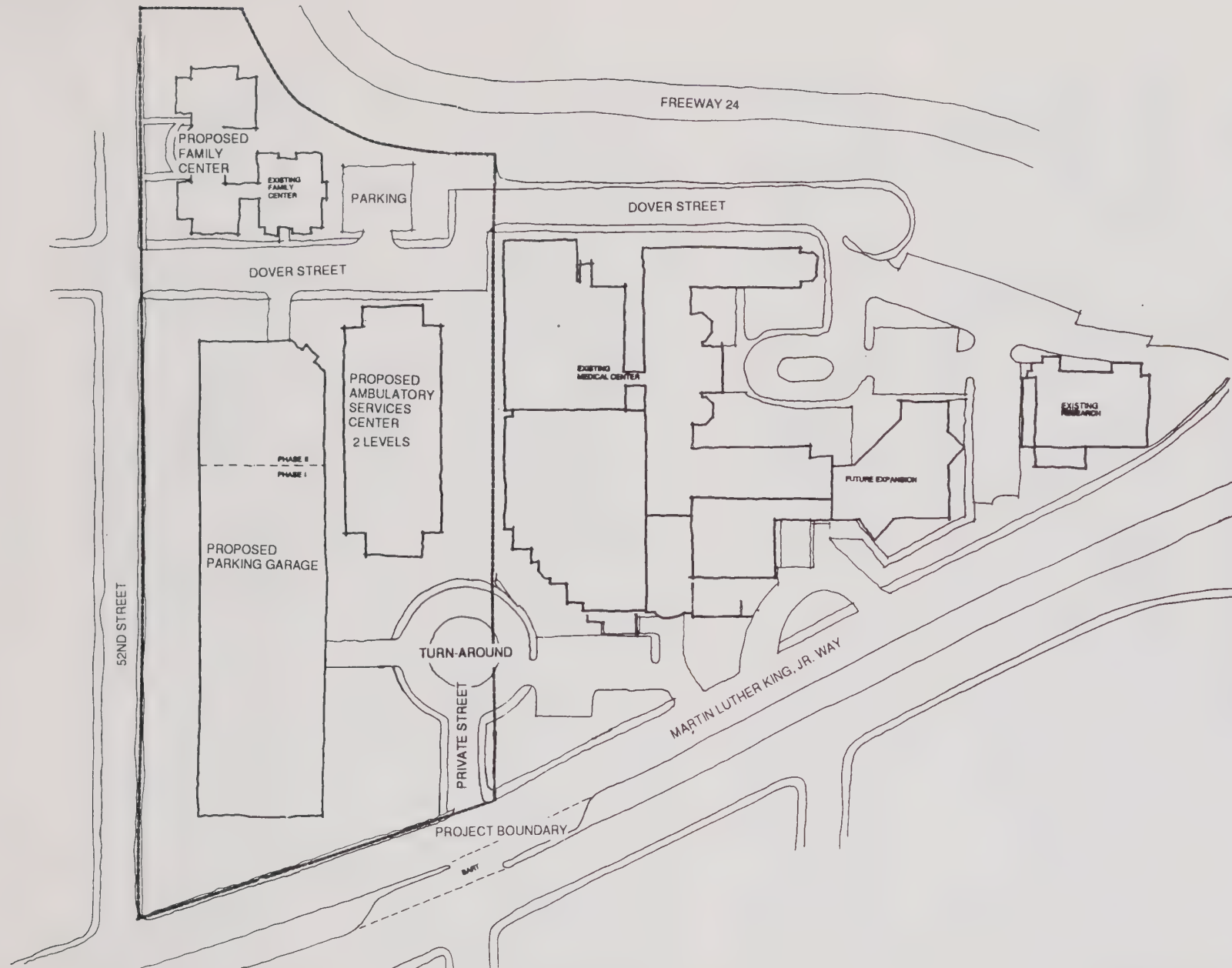


FIGURE 33
ALTERNATIVE C, REDUCED SCALE AMBULATORY
SERVICES CENTER SITE SCHEMATIC

This alternative would result in a net addition of 43,240 square feet to the project site. Trip generation and traffic impacts would be reduced by about 50% compared to the project, although all impacts associated with street closure would still occur. Total peak parking demand for this alternative would be 1,300 vehicles, indicating that nearly all parking demand at the site could be accommodated by the proposed garage and the existing off-street lots.

Environmental effects on existing residential land use and housing stock would be the same under this alternative as with the proposed project, because the development site area would be the same. Effects of operational traffic on noise and air quality from this alternative Ambulatory Services Center would be proportionately less (about 50% of the proposed project effects), while these effects generated by operation of the parking garage would be the same as with the project garage. Closure of the 52nd St. right-of-way to vehicular traffic would be included under this alternative, thus, effects on local traffic circulation would be approximately the same under this alternative as under the proposed project. Effects on emergency response times of the Oakland Police Department and the Oakland Fire Department would also be the same as under the proposed project. Effects on geology and seismicity would be about the same. Effects on hydrology could be the same or less, depending on the amount of increase in impervious surfaces on site compared to the project. Effects on operational air quality and noise would be less, proportionate to the lesser number of daily and p.m. peak-hour vehicle trips generated with operation of this alternative. The effect on CO levels at the intersection of 55th Street and Shattuck Avenue, resulting from traffic generated by the project and local traffic circulation alteration resulting from closure of 52nd Street, would occur without mitigation, and would occur with project mitigation due to cumulative traffic increases in 2000 under this alternative as with the proposed project. Effects on public services and utilities would be proportionately less, with the smaller area for outpatient services with this alternative compared to the project. Growth-inducing impacts would be approximately the same as those of the project, because a General Plan Amendment and zone change would be required as with the project. This alternative Ambulatory Services Center would be less visible in long-range and short-range views than the proposed project Center, because of the lower height of the alternative building.

The project sponsors have rejected this alternative because the reduced-scale Ambulatory Services Center would not provide sufficient outpatient services space to meet the Hospitals program needs, and would not provide sufficient space for separation of outpatient and inpatient services space for the provision of additional inpatient beds within the main hospital. The size of the Ambulatory Services Center proposed with the project evolved as a result of studies of current and future space needs conducted by the Hospital.

D. REDUCED-SCALE PARKING GARAGE AND REDUCED-SCALE AMBULATORY SERVICES CENTER

This alternative would consist of a 40,000 sq. ft. Ambulatory Services Center and a parking garage of about one-half the size of the proposed project garage (about 130,000 sq. ft. and 400 parking spaces versus the project's 260,000 sq. ft. and 800 spaces). The Ambulatory Services Center would be a two or three level building compared to the five-story, 80,000 sq. ft. building with the project. The parking garage would consist of two or three levels (including rooftop) of parking compared to four levels (including rooftop) of parking with the project. This alternative would include a 22,000 sq. ft. expansion of the Family Center, as would the proposed project. The ground-level open space, and pedestrian atrium along the 52nd Street right-of-way, would be included with this alternative as with the project (see Figure 34). This alternative would result in a net addition of 43,240 square feet on the project site.

Environmental effects related to transportation resulting from operation of this alternative would generally be of less magnitude compared to project operation. The number of trips generated by the Ambulatory Services Center of the alternative would be about 50% of the vehicle trips generated by operation of the proposed project, due to a smaller Ambulatory Services Center than with the project. Thus, the total number of trips generated by the Hospital operations would be less under the alternative compared to the project, and effects from traffic generation would be proportionately less. Traffic circulation in the Hospital vicinity could differ under the alternative, because the reduced-scale garage would provide one-half of the supply of parking spaces that the proposed project garage would provide, although the demand for parking spaces would also be less. A net addition of 170 parking spaces would be provided under this alternative. In total, under this alternative, the hospital would have a total peak parking demand of 1,300 spaces, but would provide 790 off-street spaces. Under this alternative, about 50 fewer vehicles would park on-street compared to current conditions. Therefore, parking impacts would be somewhat less than existing conditions. The amount of traffic to and from entrances and exits to the alternative garage (traffic circle off of Martin Luther King, Jr. Way and entrance/exits at Dover Street) would draw about 50% of the traffic drawn to and from the project garage (at the same locations). Demand for on-street parking spaces in the site vicinity would be greater under this alternative compared to the project, because 400 fewer parking spaces would be provided while parking demand would be reduced by 130 spaces. Operational noise and air quality effects would be less in proportion to the reduction in traffic generation under this alternative compared to the project. The effect on CO levels in 2000 at the intersection of 55th Street and Shattuck Avenue, resulting from traffic circulation changes due to closure of 52nd Street would occur without project mitigation, and would occur with mitigation due to cumulative traffic increases, under this alternative as with the proposed project.

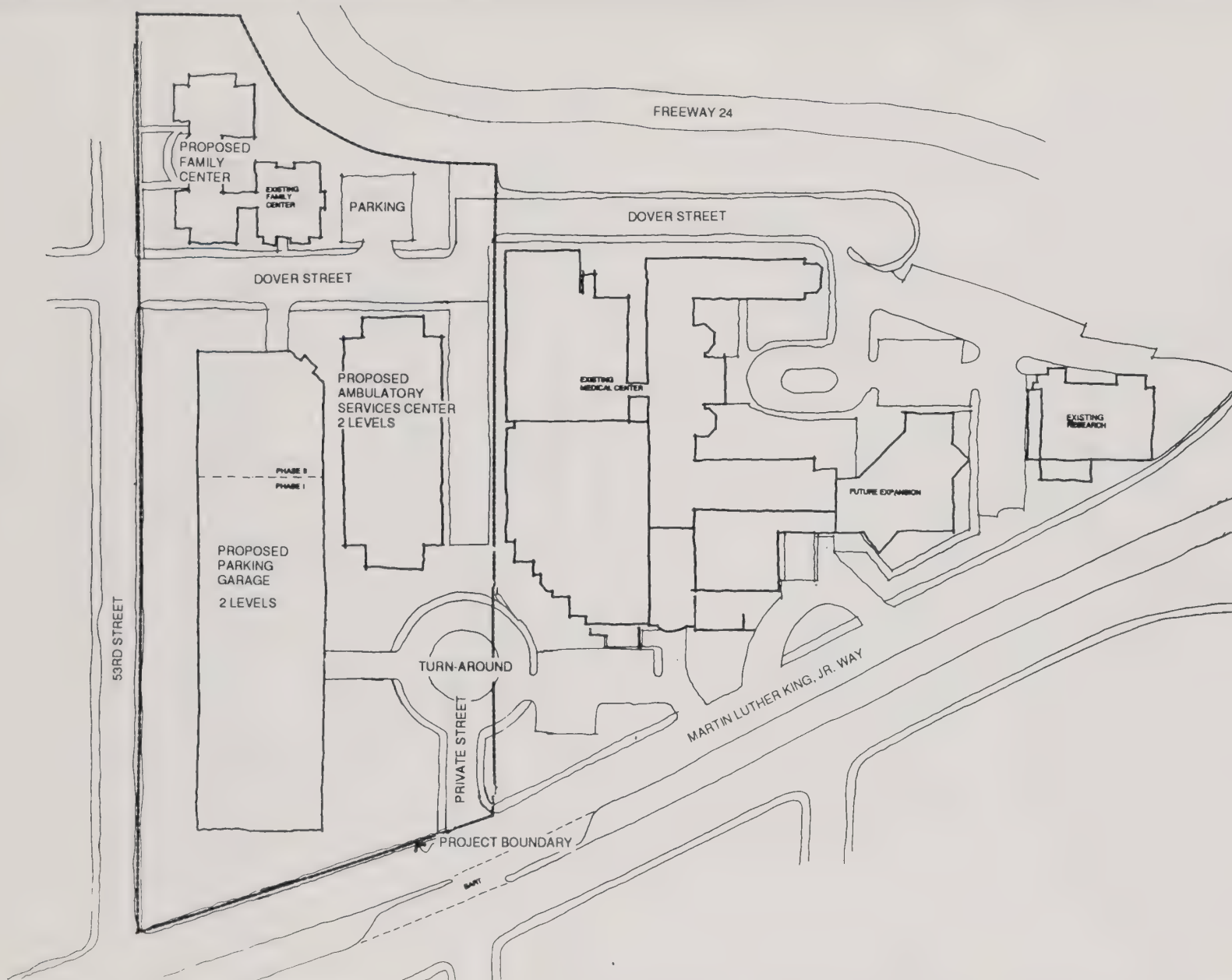


FIGURE 34
ALTERNATIVE D, REDUCED SCALE PARKING GARAGE AND
REDUCED SCALE AMBULATORY SERVICES CENTER SITE SCHEMATIC

Effects on existing residential land use and housing stock would be the same as with the proposed project, because the development site area would be the same size under this alternative. Effects on visual quality in short-range views (particularly along 53rd Street adjacent to the site) would be less under this alternative than with the project, because of the smaller size of the alternative Ambulatory Services Center and parking garage compared to that with the project. Effects on geology and seismicity, and on hydrology, would be about the same under this alternative as with the project. Effects on public utilities and energy would be about 50% under operation of this alternative, with a smaller Ambulatory Services Center compared to the project. This alternative would require a General Plan Amendment and zone change, as would the project, and would therefore have similar potential for growth-inducing effects.

The Hospital has rejected this alternative, because in the sponsor's opinion, the reduced-scale Ambulatory Services Center would not provide sufficient outpatient services space to meet the Hospital's program needs, and the reduced-scale parking garage would not provide a sufficient number of parking spaces to meet demand generated by the existing Hospital and the proposed Ambulatory Services Center. Thus, the Hospital's objectives in proposing the project would not be met under this alternative.

E. DIVERTED 52ND STREET

Under this alternative, the 52nd Street right-of-way would be diverted through the northeastern corner of the project site, to connect directly to 53rd Street. The new through street would connect 52nd Street and Martin Luther King, Jr. Way along the north and east sides of the Children's Hospital project. The new street would connect with 52nd Street near Dover Street, follow the general alignment of Dover Street toward 53rd Street, and then travel parallel to and south of 53rd Street to Martin Luther King, Jr. Way. The intersection of the re-routed 52nd Street with Martin Luther King, Jr. Way would be offset from the existing intersection with 53rd Street west of Martin Luther King, Jr. Way.

The existing 53rd Street would be maintained as a local residential street connecting to Dover Street (see Figure 35). There would be no direct connection between the existing 53rd Street and Martin Luther King, Jr. Way, although it may be possible to provide a connection to the new through street. East-west vehicular circulation would be altered compared to existing conditions, but would have approximately the same capacity as currently available.

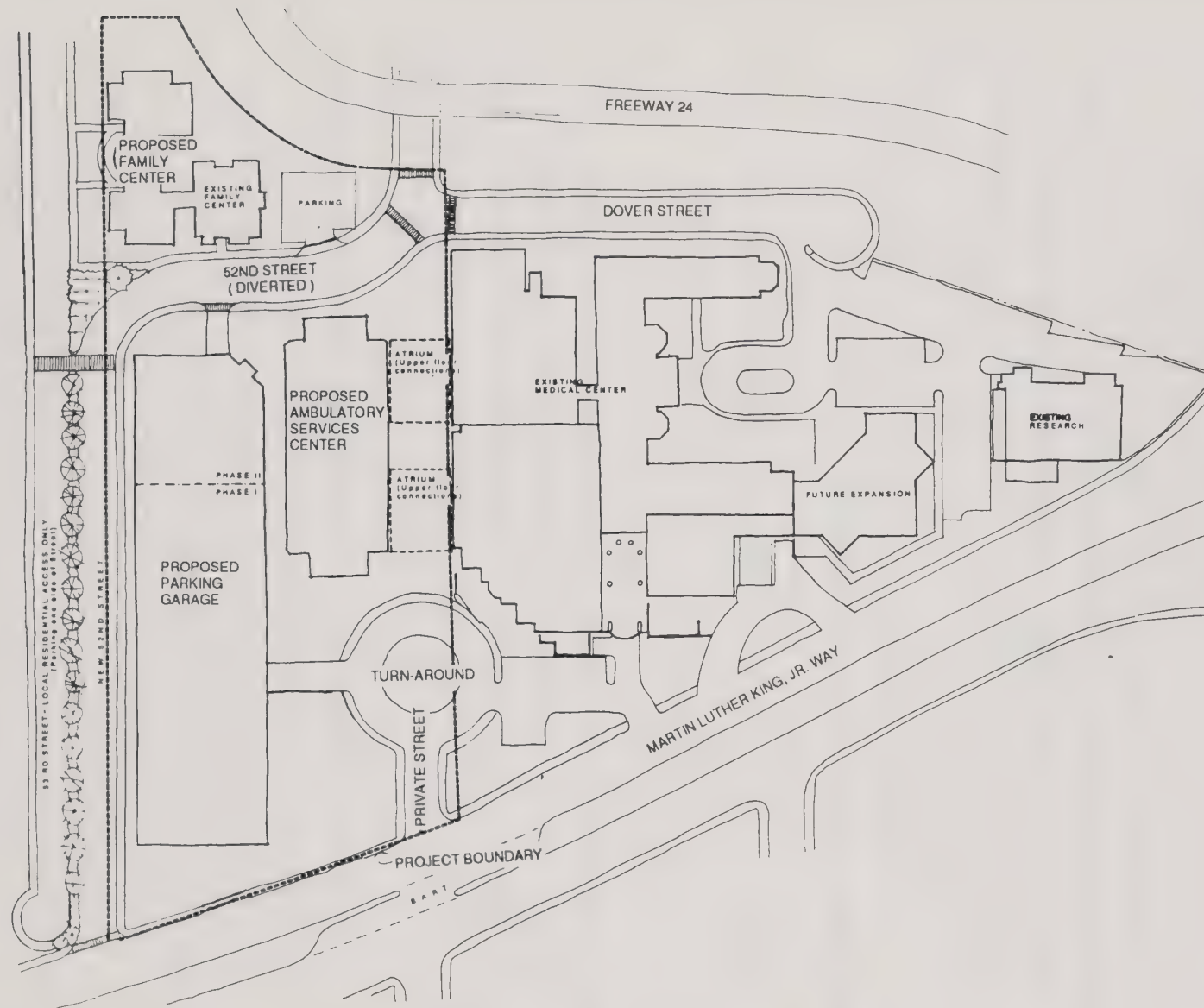


FIGURE 35
ALTERNATIVE E, DIVERTED 52ND STREET
SITE SCHEMATIC

The Ambulatory Services Center, Family Center expansion and parking garage would contain approximately the same floor areas (about 80,000 sq. ft., about 22,000 sq. ft. and about 260,000 sq. ft., respectively) as with the proposed project. However, the site layout would have to be altered in order to accommodate the 52nd St. diversion. Both the Ambulatory Services and parking structures would be shifted to the west, closer to Martin Luther King Jr. Way. The provision of a new street right-of-way along the north side of the project site would reduce the site area available for development, which could impact the sizes and layouts of the proposed parking garage and medical office building. If the new street were to provide similar travel speeds as the existing 52nd Street, it would have to be designed with curves to allow 25 to 30 mile per hour operation. A minimum centerline radius of 300 feet would be recommended.^{/2/} These curves would not fit within the existing right-of-way of 52nd Street and Dover Street. Additional land area would be required from the new development site, which could affect the size and layout of the proposed buildings.

The proposed parking garage driveway on Dover Street would have to be designed to provide safe vehicle movements to and from a through street, compared to the project, where Dover Street would be a lightly-used local street.

This alternative would reduce the traffic impacts of street closure, by maintaining a through connection between Martin Luther King Jr. Way and 52nd Street. Minimal diversion to alternative routes would be expected. Nearly all of the existing through traffic on 52nd Street adjacent to the hospital would use the new connection rather than divert to 45th or 55th Streets. There would be some out-of-direction travel for vehicles to and from areas south of 52nd Street.

Traffic volumes along 53rd Street would increase from 1,300 daily vehicles to over 8,000 daily vehicles. Traffic impacts and noise would be increased for residents along the north side of 53rd Street. Accessibility by automobile for these residents would also be impacted, because there would not be a direct connection between 53rd Street and Martin Luther King, Jr. Way. A through connection to 53rd Street would provide a direct link between 51st Street and Adeline Street, and may increase traffic volumes on 53rd Street west of Martin Luther King, Jr. Way.

The intersection of Martin Luther King, Jr. Way and 53rd Street would introduce operational concerns under the diversion alternative, due to the offset approaches to Martin Luther King, Jr. Way and sight distance issues caused by the columns supporting the BART structure. A left turn pocket should be provided on southbound Martin Luther King, Jr. Way at 53rd Street, as peak hour left turn volumes for 110 to 180 vehicles would be expected with the new connecting street. This would require reconstruction of the existing raised median under the BART tracks on both the north and south sides of 53rd Street. The intersection would warrant signalization under this alternative. Non-standard split phasing may be required on 53rd Street due to the offset approaches and sight distance concerns. Traffic signals along Martin Luther King, Jr. Way would require coordination and retiming due to the close spacing of signalized intersections.

With through traffic diverted to the north side of the hospital, the portion of 52nd Street adjacent to the hospital could be closed as in the proposed project. Conflicts between pedestrians and vehicles at Children's Hospital would be significantly reduced, compared to existing conditions.

Environmental effects on existing residential land use and housing stock would be the same under this alternative as with the proposed project, because the development site area would be the same. Effects on traffic circulation in the site vicinity would, overall, be less than with the proposed project. The number of vehicle trips generated by the operation of the Ambulatory Services Center and the parking garage would be the same under this alternative as with the project; however, effects on local vehicular circulation would be less under this alternative, because the capacity for east-west vehicular travel past the site would not change over existing conditions, compared to the project. The effect of street closure and project-generated traffic increases on local traffic circulation without mitigation, and with mitigation combined with cumulative traffic increases, and the resulting significant effect of violations of the state CO standard in 2000 at the intersection of 55th Street and Shattuck Avenue, would not occur under this alternative compared to the proposed project. Effects on emergency response times of the Oakland Police Department and the Oakland Fire Department would be less under this alternative, because through traffic would use a diverted 52nd Street, and would therefore remain open to emergency vehicle travel. Effects on operational noise and air quality would be the same, although the road segments impacted would be different under this alternative due to different traffic circulation patterns. Effects on geology and seismicity, and on hydrology, would be about the same under either the alternative or the proposed project. Demand on public services and utilities, and energy, would be essentially the same under this alternative as with the proposed project except that the effects on emergency response times of the Police and Fire Departments would be less under this alternative.

The Ambulatory Services Center and parking garage structures would have similar visibility in long-range and short-range views as would the proposed project structures. Development of this alternative would require a General Plan Amendment and Zone Change of the site, as with the project, and would therefore have the same potential growth-inducing impacts as the project.

This alternative has not been endorsed by City staff due to potential impacts on residences along 53rd Street, and potential operational problems especially at the 53rd Street/Martin Luther King, Jr. Way intersection.

F. NO 52ND STREET PEDESTRIAN ATRIUM

This alternative would consist of an Ambulatory Services Center and parking garage as under the proposed project. The pedestrian atrium proposed for the 52nd Street right-of-way, and the traffic access circle adjacent to Martin Luther King, Jr. Way, proposed with the project would not be developed. Fifty-Second Street would remain open to vehicle traffic under this alternative.

Environmental effects on transportation would be less than with the project, because local east-west traffic circulation would be basically unchanged from existing conditions under this alternative, compared to the east-west circulation effects resulting from the proposed closure of 52nd Street to vehicular traffic with the project. Traffic generated by the Ambulatory Services Center, Family Center expansion and the parking garage would be the same as that generated by the project.

Intersection operations would be impacted by traffic generated by the Ambulatory Services Center under this alternative, although to a generally lesser extent than would occur with the proposed closure of 52nd Street with the project (see Table 19). Under this alternative operation, the LOS at the intersection of Martin Luther King, Jr. Way and 55th Street would change to "B" during the a.m. peak-hour, and would remain at LOS "D" during the p.m. peak hour, compared to reductions in LOS to "C" during the a.m. peak-hour and to "F" during the p.m. peak-hour with closure of 52nd Street. The LOS at the intersection of Shattuck Avenue and 55th Street would remain at "A" during the a.m. peak-hour and "B" during the p.m. peak hour, compared to reductions to "B" and "E" with the project's closure of 52nd Street during the a.m. and p.m. peak hours, respectively. The LOS at the intersection of Telegraph Avenue and 51st Street would remain at "E" under operation of this alternative during the p.m. peak hour, but would improve to "D" during the p.m. peak hour under operation of the proposed project.

TABLE 19: SIGNALIZED INTERSECTION OPERATIONS - 52ND STREET OPEN
LEVEL OF SERVICE AND DEMAND / CAPACITY RATIO

<u>AM PEAK HOUR</u>			
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>With Project 52nd Open</u>	<u>With Project 52nd Closed</u>
MLK/45th	A (.16)	A (.16)	A (.19)
MLK/47th	B (.68)	C (.71)	C (.73)
MLK/52nd	B (.69)	C (.72)	C (.71)
MLK/55th	A (.59)	B (.60)	C (.71)
Shattuck/52nd	B (.68)	C (.72)	C (.71)
Shattuck/55th	A (.42)	A (.44)	B (.60)
Telegraph/45th	A (.39)	A (.34)	A (.38)
Telegraph/51st	C (.76)	C (.76)	C (.74)

<u>PM PEAK HOUR</u>			
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>With Project 52nd Open</u>	<u>With Project 52nd Closed</u>
MLK/45th	A (.20)	A (.20)	A (.25)
MLK/47th	C (.74)	C (.76)	C (.76)
MLK/52nd	D (.89)	F (>1.00)*	C (.76)
MLK/55th	D (.86)	D (.89)	F (>1.00)*
Shattuck/52nd	D (.87)	D (.87)	F (>1.00)*
Shattuck/55th	B (.67)	B (.66)	E (.95)*
Telegraph/45th	A (.49)	A (.49)	A (.51)
Telegraph/51st	E (.92)	E (.93)	D (.87)

* Level of Service under existing operating conditions. Recommended mitigations will improve level of service.

Source: DKS Associates

Operation of the alternative with 52nd Street open to vehicle traffic would have minimal impact on the existing operating LOS at unsignalized intersections (see Table 20). Closure of 52nd Street with the project would result in a modest improvement in the peak hour LOS at the intersections of Market and 53rd Streets (a.m.), and a greater improvement in LOS at the intersection of the Highway 24 off-ramp with 52nd Street (a.m. and p.m.), compared to operation of this alternative with 52nd Street remaining open.

TABLE 20: UNSIGNALIZED INTERSECTION OPERATIONS - 52ND STREET OPEN
LEVEL OF SERVICE - MAJOR STREET / MINOR STREET

<u>AM PEAK HOUR</u>			
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>With Project 52nd Open</u>	<u>With Project 52nd Closed</u>
Market/52nd	A/A	A/A	A/A
Market/53rd	A/B	A/B	A/A
MLK/53rd	A/E	A/E	A/E
Dover/52nd	A/A	A/A	A/A
Highway 24 Offramp/52nd	*/D	*/D	*/C
Telegraph/55th	A/D	A/D	A/D

<u>PM PEAK HOUR</u>			
<u>Intersection</u>	<u>Existing 52nd Open</u>	<u>With Project 52nd Open</u>	<u>With Project 52nd Closed</u>
Market/52nd	A/C	A/C	A/C
Market/53rd	A/C	A/C	A/C
MLK/53rd	A/E	A/E	A/E
Dover/52nd	A/A	A/C	A/A
Highway 24 Offramp/52nd	*/E	*/E	*/D
Telegraph/55th	A/F	A/F	A/F

* No left turn allowed from major street (52nd).

Note: Level of Service for most difficult left turn movement from major street / Level of Service for minor street approach with highest delay.

Source: DKS Associates

Curb zones for Hospital visitor pick-up and drop-off would be located along both the north and south sides of 52nd Street, adjacent to Hospital building entrances. The construction of a new medical office building and a parking garage on the north side of 52nd Street would intensify pedestrian crossing activity across 52nd Street. As vehicle traffic on 52nd Street is also expected to increase in the future, there would be increases in pedestrian-vehicle conflicts and a higher potential for pedestrian-vehicle and vehicle-vehicle accidents adjacent to the hospital under this alternative. Operational effects on noise and air quality would be essentially the same as with the project except that the effect on CO levels at the intersection of 55th Street and Shattuck Avenue, resulting from changes in traffic circulation due to closure of 52nd Street without mitigation, and with mitigation plus cumulative traffic increases, would not occur in

2000 under this alternative compared to the project. This alternative would require a General Plan Amendment and Zone Change for the site, and would therefore have the same potential growth-inducing impacts as the project.

This alternative would have the same effect as would the proposed project on existing residential land use and on existing housing stock. The Ambulatory Services Center and parking garage of this alternative would have the same effect on views from long-range as well as short-range viewpoints as would the two structures of the project. Views along 53rd Street would be impacted to the same extent as with the proposed project. Views along 52nd Street from short range would consist of the two new structures separated by 52nd Street essentially as it now appears, compared to replacement of on-street vehicle parking and traffic with a landscaped pedestrian atrium and traffic circle with the project.

F1: PEDESTRIAN OVERPASS ACROSS 52ND STREET

This alternative variant would have a single pedestrian overpass bridge across 52nd Street, between the new Ambulatory Services Center and the existing Hospital Nursing Tower, thereby physically separating pedestrians traveling between the alternative project and the existing Hospital from east-west motor vehicle traffic on 52nd Street. A pedestrian overpass would have to provide a minimum of 16 feet of vertical clearance over 52nd Street (see Figure 36). As a result, the overpass would most likely connect the third floors of the two buildings. This alternative variant could, however, have greater potential adverse effects on pedestrian safety than would the proposed project, if no strategic design is implemented that would require all pedestrians walking between the new structures and the existing Hospital campus to utilize the overpass instead of crossing at grade (see Alternative F5). Since the entryways and activity centers of the buildings would still be at ground level, the pedestrian overpass would require significant out-of-direction travel for most pedestrians. Many would choose to cross 52nd Street at ground level rather than use the overpass. A pedestrian overpass would not be as effective in improving the pedestrian environment as the proposed project.

The Hospital has rejected this alternative because the Hospital does not consider that this alternative variant would provide adequate safety for pedestrians traveling between the existing Hospital and the expansion area.

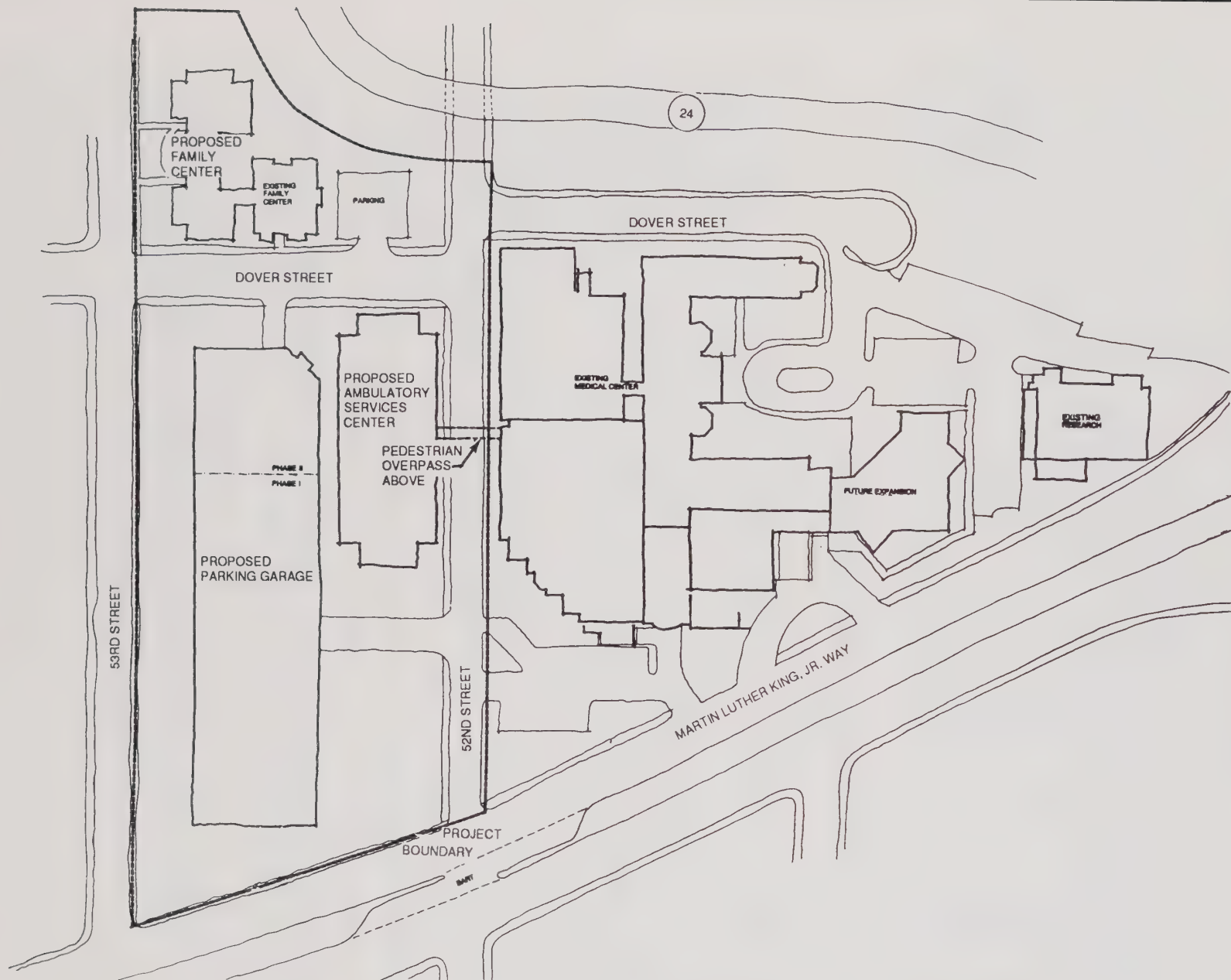


FIGURE 36
ALTERNATIVE F1, PEDESTRIAN OVERPASS
ACROSS 52ND STREET SITE SCHEMATIC

Additionally, because the required overhead clearance at 52nd Street for the pedestrian overpass, for traffic passage, emergency vehicle access and utility connections, would raise the floor of the overpass to about 16 feet above grade, the Hospital has indicated that the reconfiguration of floor plans and program operations required if pedestrian access were at the third instead of grade level would be extremely disruptive to Hospital operations.

F2: PEDESTRIAN UNDERPASS ACROSS 52ND STREET

This alternative variant would be the development of a pedestrian tunnel, connecting the Ambulatory Services Center and the Nursing Tower, across 52nd Street. As with Alternative Variant F1, this alternative variant would physically separate pedestrians from east-west motor vehicle traffic on 52nd Street. The pedestrian underpass, or tunnel, would provide pedestrian access between Hospital campus areas at about one level below grade (see Figure 37). This alternative variant, like Alternative Variant F1, could have greater potential adverse effects on pedestrian safety than would the proposed project, if there is no design implemented that would prevent pedestrians from crossing 52nd Street at-grade between the new and existing facilities (see Alternative F5). A pedestrian underpass under 52nd Street would be more effective in diverting pedestrians from crossing at street level compared to a pedestrian overpass. Since the main level of the existing hospital building is already several feet below street level, a pedestrian underpass could potentially be built which would require little out-of-direction travel. However, there are major utility lines under 52nd Street which would require the pedestrian undercrossing to be built much further underground than would otherwise be necessary. There are also safety concerns at pedestrian undercrossings. They must be wide, well lit and well maintained in order to assure users of their safety.

The Hospital has rejected this alternative variant because adequate pedestrian safety cannot be provided. Additionally, because the existing Hospital campus has been developed for on-grade pedestrian access, reconstruction of all ramps providing access to the first floor of the existing north (Nursing) tower would be required, to connect to the tunnel under 52nd Street. It is the project sponsor's opinion that the costs and disruptions to current operations resulting from reconfiguration of all handicapped ramps on the first floor of the existing Nursing Tower would render this alternative variant infeasible.

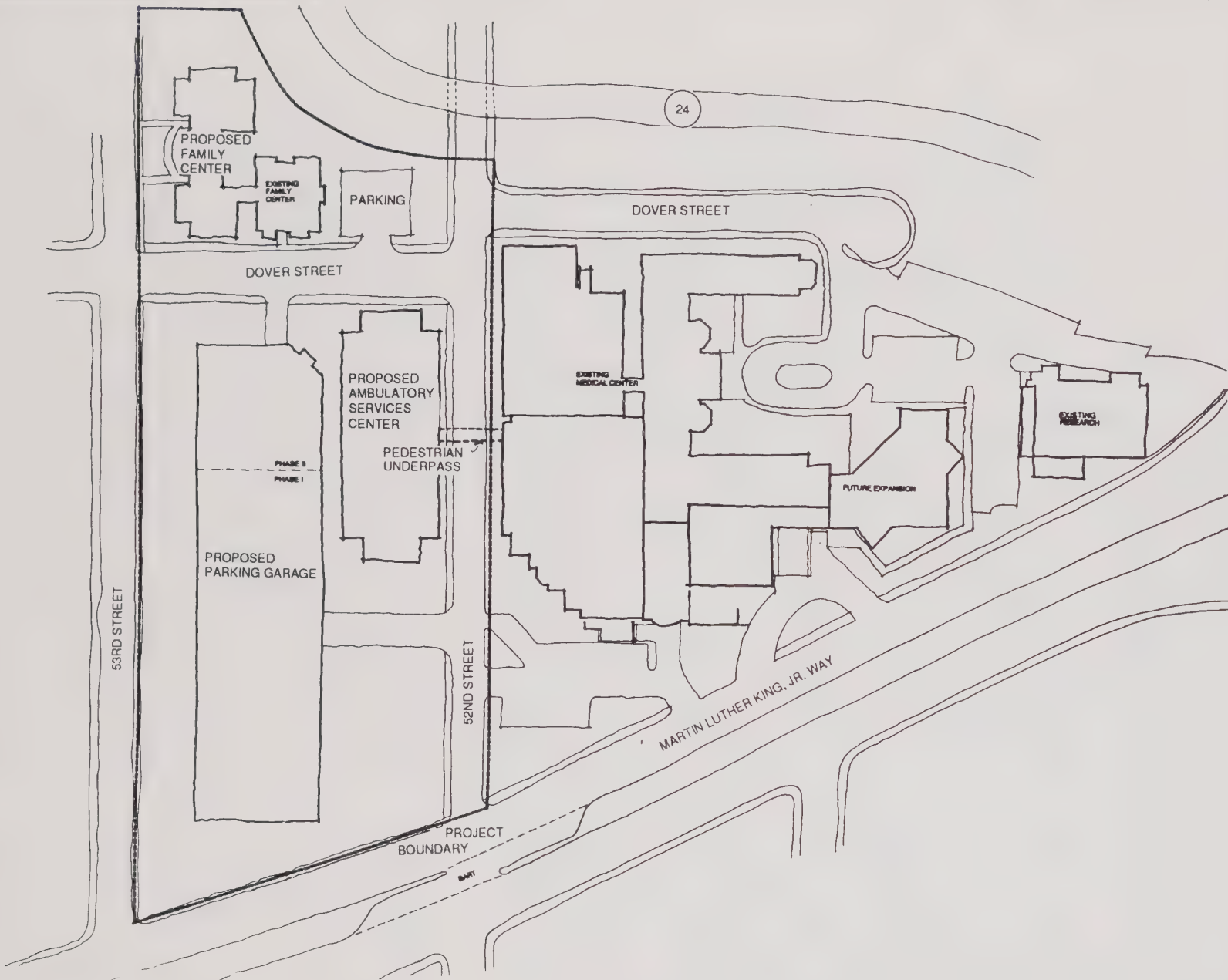


FIGURE 37
ALTERNATIVE F2, PEDESTRIAN UNDERPASS
ACROSS 52ND STREET SITE SCHEMATIC

F3: DEPRESSED 52ND STREET RIGHT-OF-WAY

This variant of Alternative F would consist of depression of the 52nd Street right-of-way below grade between Martin Luther King Jr. Way and Dover Street, and a pedestrian bridge across 52nd Street for access between the Ambulatory Services Center and the north (Nursing) tower on the existing Hospital campus. As with Alternative Variants F1 and F2, this alternative variant would result in the physical separation of pedestrians from east-west motor vehicle traffic along 52nd Street (see Figure 38).

This alternative variant would have less potentially significant effects on pedestrian safety than would either Alternative Variant F1 or F2, because pedestrians would not be able to cross 52nd Street except by the overpass. Compared to the proposed project, effects on pedestrian safety would be about the same. However, there would be significant constraints due to the existing utilities under 52nd Street, provision of adequate clearances and grades on the roadway, encroachment on Caltrans State Route 24 right-of-way, and sight distance considerations.

The Hospital has rejected this alternative variant, because relocation of all underground utilities within the 52nd Street right-of-way would be required. Additionally, because a minimum clearance of 16 feet is required between the road bed and the floor of the pedestrian overpass, the horizontal distance between Dover Street and Martin Luther King Jr. Way is insufficient to allow the roadway to be depressed to the required depth without creating prohibitively steep roadway grades at both ends of the depressed roadway.

F4: SIGNALIZED CROSSWALK AT MID-BLOCK ON 52ND STREET

A signalized crosswalk could be installed across 52nd Street between Martin Luther King, Jr. Way and Dover Street. The signal would be activated by pedestrians using a push button. The signalized crosswalk would be located a minimum of 150 feet from the next crosswalk or street intersection. Curbside parking should be prohibited for 100 feet in advance of and 20 feet beyond the crosswalk. Adequate signing must also be provided in advance of the crosswalk. The signalized crosswalk would not eliminate problems created by pedestrians crossing vehicle flows on 52nd Street, but safety would be improved for those pedestrians compared to existing conditions. However, effects on pedestrian safety would be greater, in that pedestrians would not be physically separated from motor vehicle traffic on 52nd Street, compared to the proposed project.

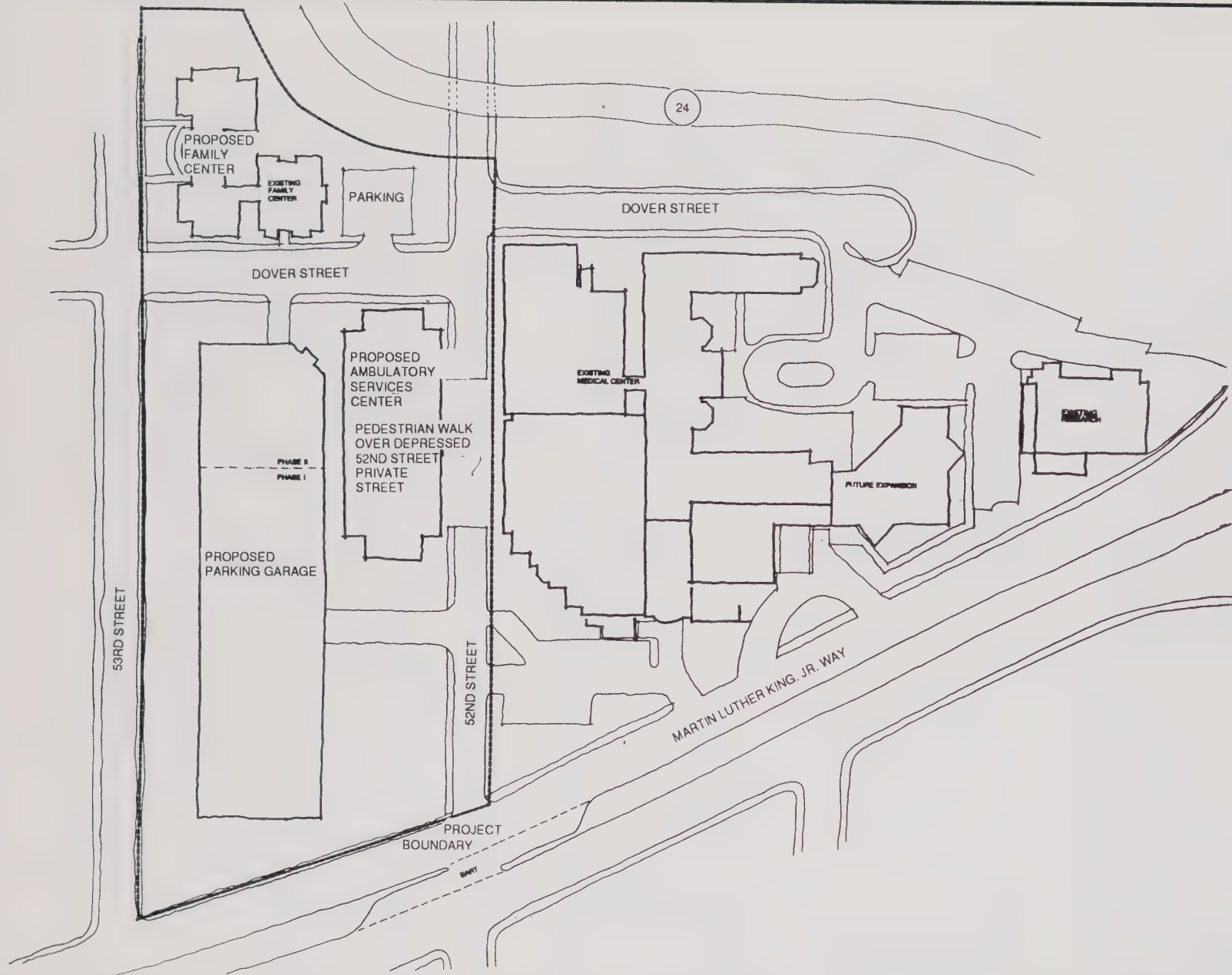


FIGURE 38
ALTERNATIVE F3, DEPRESSED 52ND STREET
RIGHT - OF - WAY SITE SCHEMATIC

F5: MEDIAN BARRIER ON 52ND STREET

This alternative variant would introduce a raised median island in the center of 52nd Street. The median island would feature fencing and/or dense landscaping to allow pedestrians to cross 52nd Street between the existing hospital and the proposed Ambulatory Services Center only at designated locations. The designated locations would include the signalized crosswalk at Martin Luther King, Jr. Way and a crosswalk on the west side of Dover Street. The intersection of 52nd Street and Dover Street could be signalized for pedestrian crossings (see Figure 39).

Alternatively, a signalized mid-block crosswalk could be installed to connect the main entrances of the existing hospital and the proposed Ambulatory Services building, as in Alternative Variant F4. The median barrier alternative could also be combined with a pedestrian overpass and/or underpass, as in Alternative Variants F1 and F2.

A median on 52nd Street should be a minimum of six feet wide to accommodate landscaping. In addition, it would be desirable to provide left-turn pockets in the median to allow vehicle access to the proposed parking garage and the passenger drop-off area. The median width would be 16 feet in locations where turn pockets are provided. This alternative would require an additional 12 feet of right-of-way for 52nd Street if parking is removed (widen from existing 32 feet to 44 feet), or 20 feet of right-of-way if parking is to be provided on one side of 52nd Street. A loss of right-of-way on the project site would impact the proposed Ambulatory Services Center and would require reconfiguration of the building to provide the necessary outpatient services space.

F6: ONE-WAY VEHICLE TRAFFIC ON 52ND STREET

This alternative variant would designate traffic to one-way along 52nd Street, between Shattuck Avenue and Martin Luther King, Jr. Way. Vehicle traffic on 52nd Street between the project site and existing Hospital campus would be diverted to alternate routes for one direction of travel, while traffic for another travel direction would remain. Under this alternative variant, pedestrians travelling between the new structures on the project site and the existing Hospital campus would have to cross 52nd Street, and would thereby have to avoid vehicle traffic there. Thus, pedestrian safety would not be improved compared to the proposed project's removal of vehicle traffic from 52nd Street.

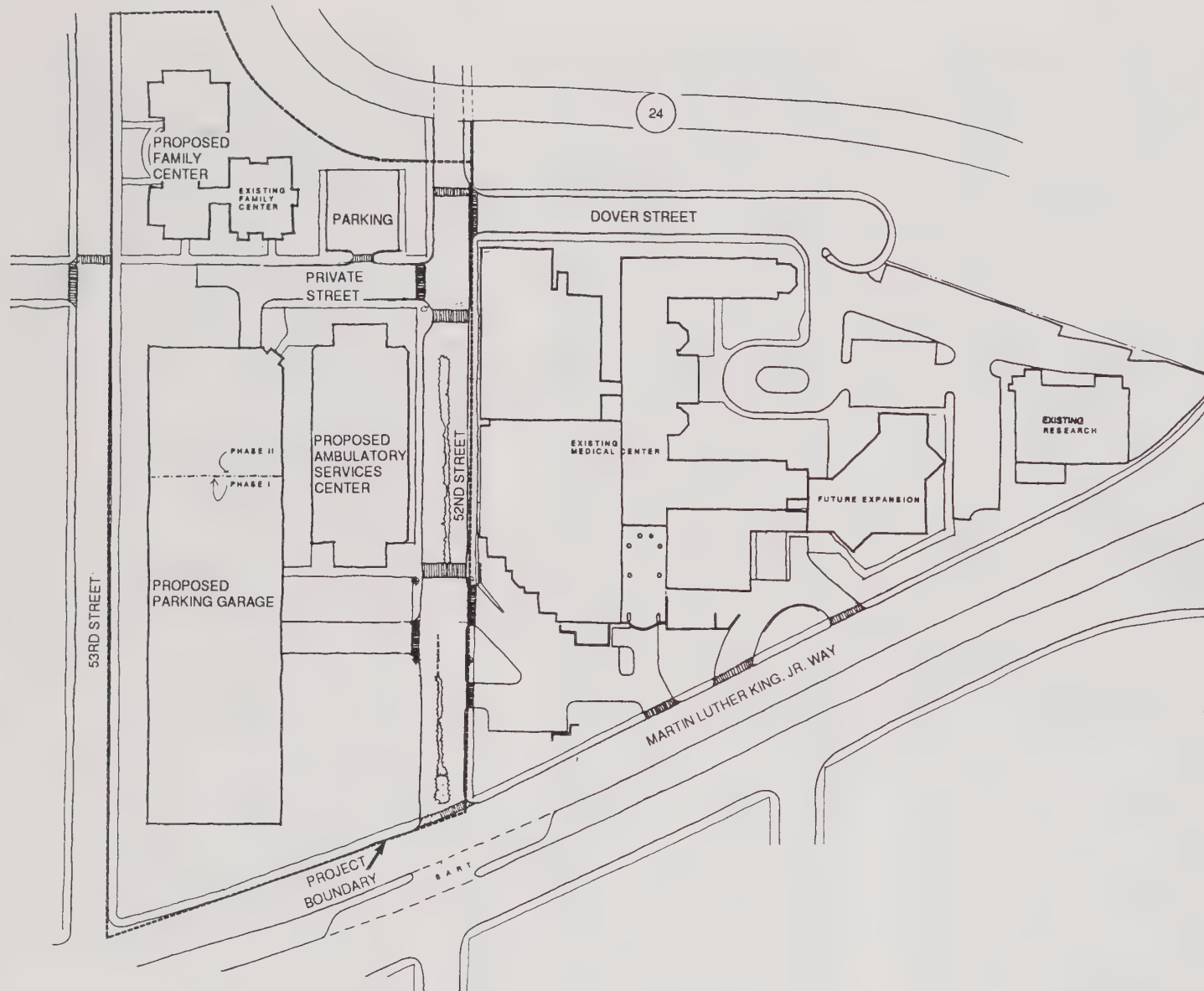


FIGURE 39
ALTERNATIVE F5, MEDIAN BARRIER
ON 52ND STREET SITE SCHEMATIC

The designation of 52nd Street as a one-way street, without a nearby one-way street in the opposite direction, would cause confusion for motorists not familiar with the area.

NOTES: Alternatives

/1/ American Medical Buildings, Parking Study for Children's Hospital Medical Center
Oakland, California, February 18, 1986.

/2/ Caltrans, Highway Design Manual, 1987.

XI. EIR AUTHORS AND CONSULTANTS, ORGANIZATIONS AND PERSONS CONSULTED

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Mike Scott, Industrial Power Engineer

XII. APPENDICES

A. REQUEST FOR ENVIRONMENTAL REVIEW AND INITIAL STUDY

B. NOTICE OF PREPARATION AND RESPONSES

A. REQUEST FOR ENVIRONMENTAL REVIEW AND INITIAL STUDY

File No. _____
 Ref. No. _____

City of Oakland
 Oakland, California

REQUEST FOR ENVIRONMENTAL REVIEW
California Environmental Quality Act
 (to be completed by Project Sponsor)

Request is hereby made to the Director of City Planning to commence environmental review in compliance with the California Environmental Quality Act for the project described below. The following information is provided to assist in the preparation of an Initial Study. I understand that additional information may be required by the Director in order to complete an environmental assessment of the project.

I. PROJECT SPONSOR

Name of Project Sponsor Children's Hospital Medical Center

Contact Person Clifton Louie, Vice President Support Services

Address 747 52nd Street, Oakland, California 94609

Telephone No. 415.428.3371 Date 18 December 1987

II. PROJECT DESCRIPTION

Name of Project CHMC Road Closure and Site Rezoning

Project Location Martin Luther King Jr. Way, 53rd Street, Dover Street, 52nd Street

Site Size 177,000 square feet Existing Use (Specify) R-40, Garden Apartment and R-50, Medium Density Residential

Proposed Use (Specify) S-1 Hospital

Describe project fully: (Attach plans, specifications and published descriptions; include facts in numerical or quantitative terms -- e.g., 25 offstreet parking spaces; 10,000 cubic yds of earth will be removed. Attach additional sheets if necessary.)

See attachment A.

Indicate whether any alternative projects, project modifications or alternative sites were considered and, if so, why these were rejected in favor of the project as proposed. See Attachment B.

Please answer the following questions:

<u>Geophysical</u>	Do Not		
	<u>Yes</u>	<u>No</u>	<u>Know</u>
1. Will the project require any grading, excavation, or other ground disturbance?	<u>X</u>	<u>—</u>	<u>—</u>
2. Are any unique geologic or physical features located on the project site?	<u>—</u>	<u>X</u>	<u>—</u>
3. Is the site located on fill or on a slope of 10% or greater?	<u>—</u>	<u>X</u>	<u>—</u>
4. Will the project involve construction of facilities within one-quarter mile of an area which, according to the USGS map of Areal and Engineering Geology of the Oakland East Quadrangle, California (Dorothy H. Radbruch, 1969) is within 1/4 mile of an earthquake fault or exhibits soil instability?	<u>—</u>	<u>X</u>	<u>—</u>
5. Will the project be located in an area which according to the City Streets and Engineering Department's soil stability maps has experienced landslides or other soil instability?	<u>—</u>	<u>X</u>	<u>—</u>
6. Will the project be located near, adjacent to, or over a lake, stream or other body of water?	<u>—</u>	<u>X</u>	<u>—</u>
7. Will the project require changing the existing features of lakes, streams, other bodies of water, swales or drainage contours?	<u>—</u>	<u>X</u>	<u>—</u>

Air and Water

8. Will the project facilities generate smoke, vapor, exhaust or other emissions?	<u>—</u>	<u>X</u>	<u>—</u>
9. Will the project facilities or its users discharge any substances into any surface waters?	<u>—</u>	<u>X</u>	<u>—</u>

<u>Biotic</u>	Do Not		
	<u>Yes</u>	<u>No</u>	<u>Know</u>
10. Will the project require the removal of a large tree or trees (over 9 inches in diameter measured on the main trunk four feet above the ground) or extensive removal of other vegetation? Will oak trees be removed?	—	<u>X</u>	—
11. Does the project site serve as a significant habitat, food source, nesting place or source of water for fish or wildlife?	—	<u>X</u>	—
12. Have rare or endangered species of plants or animals been identified on the project site or in its vicinity?	—	<u>X</u>	—

Land Use and Socio-Economic Factors

13. Will the project displace any residents or businesses?	<u>X</u>	—	—
14. Has contact with homeowner's associations or other groups indicated probable opposition to the project or its design?	<u>X</u>	—	—
15. Are any historically, architecturally or archeologically significant buildings or sites located on the property?	—	<u>X</u>	—
16. Are existing utilities (e.g., electricity, gas, water, sewers) inadequate or are they lacking at the project site?	—	<u>X</u>	—
17. Will the proposal require outdoor lighting?	—	<u>X</u>	—
18. Will the project involve installation of compressors, generators or other mechanical equipment?	<u>X</u>	—	—
19. Will the project involve installation of large outdoor trash bins?	—	<u>X</u>	—
20. Will the project involve use or disposal of potentially hazardous materials such as toxic substances, flammables or explosives?	—	<u>X</u>	—
21. Will the project result in open areas that are unpaved or unlandscaped?		<u>X</u>	
22. Is the project related to a larger project or series of projects?	<u>X</u>	—	—

Please elaborate upon any "yes" answers, using an attached sheet if necessary. Explain numerically wherever possible (e.g., if the answer to question 1 is "yes," indicate the volume of material involved). See Attachment C.

III. ENVIRONMENTAL SETTING

A. Describe the project site as it exists before the project, including additional information, if appropriate, on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Use additional sheets if necessary.

A. Existing neighborhood is essentially flat in grade. On site development is single and two story wood frame residential structures and surface parking lots.

B. Describe the surrounding properties, including information on plants and animals, and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.). Use additional sheets if necessary.

B. Properties that will remain in the surrounding neighborhood are primarily one and two story houses of wood frame construction. The scale of the development of the surrounding area is low: up to 35 feet. front yard set backs vary from 10 to 30 feet.

IV. CERTIFICATION (BY APPLICANT): I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: 18 December 1987

(Signature of Project Sponsor)

V. WAIVER OF TIME LIMITATIONS

(To be filled out only by applicants for zoning or subdivision approval.)

I hereby agree to waive all time limitations of the Zoning Regulations and the Subdivision Regulations with respect to my application for approval under said regulations for the project requested above for environmental review.

(Signature of Project Sponsor)

Date: _____

INFORMATION REVIEWED BY:

(Signature of Staff Officer)

Date: _____

Children's Hospital Medical Center
Clifton Louie, Vice President Support Services
747 52nd Street, Oakland, California 94609
415.428.3371
18 December 1987

Attachment A.

Over the past seventy-five years Children's Hospital Medical Center has grown from the modest beginnings of a 30 hospital located in a former stable to a hospital with an nationwide reputation as a leader in primary-care health care delivery to children and for service to the community. the original site has become increasingly constricted over time. Not only has the hospital grown dramatically, but outside forces have also had large impact on the site. With the construction of the Bay Area Rapid Transit system in the 1960's, expansion of hospital site to the west across Grove Street was stopped. In the 1970's the construction of the Grave-Shafter Freeway stopped any further hospital growth to the south or east. Each of these transportation corridors have had large impacts on the development of the hospital site.

Construction of the new nursing tower in 1982 completed development of the hospital site north to 52nd Street. Although some limited expansion of hospital programs can, and, will occur on the existing hospital campus, there does not remain sufficient available land area to provide for full development of hospital growth and associated parking.

The vacation of 52nd Street between Martin Luther King Jr. Way and Dover Street and the acquisition of the remaining residential properties will provide Children's Hospital Medical Center with the opportunity to respond to future demand by expanding north from the severely constricted existing site. The vacated streets would be retained as open space and developed as a pedestrian mall. Motor vehicle traffic would be limited to access to the proposed parking structure. The development of the remainder of the hospital site will be primarily oriented to outpatient services.

Parking for 800 cars will be provided in an on site parking structure (260,000 square feet). The structure will provide readily available] parking to staff and visitors and reduce traffic on adjacent neighborhood streets. A part of the ground floor of the garage would be developed to have a public orientation of retail-style activity. Possible programs to be installed might include Foundation, Campus Security, or Pharmacy. The intent will be to activate the street and will reduce the negative image attributes of a parking structure on the adjacent residential area.

Children's Hospital Medical Center will be able to expand service to the community through the construction of the 120,000 square foot Ambulatory Services Center. The Ambulatory Services Center, unlike most hospital programs, is oriented to those services that can be provided on an outpatient basis.

115,050 square feet of the site, 2.64 acres, will be constructed and maintained as permanent outdoor open space for the enjoyment of the staff, patients, and neighbors.

Children's Hospital Medical Center
Clifton Louie, Vice President Support Services
747 52nd Street, Oakland, California 94609
415.428.3371
18 December 1987

Attachment B.

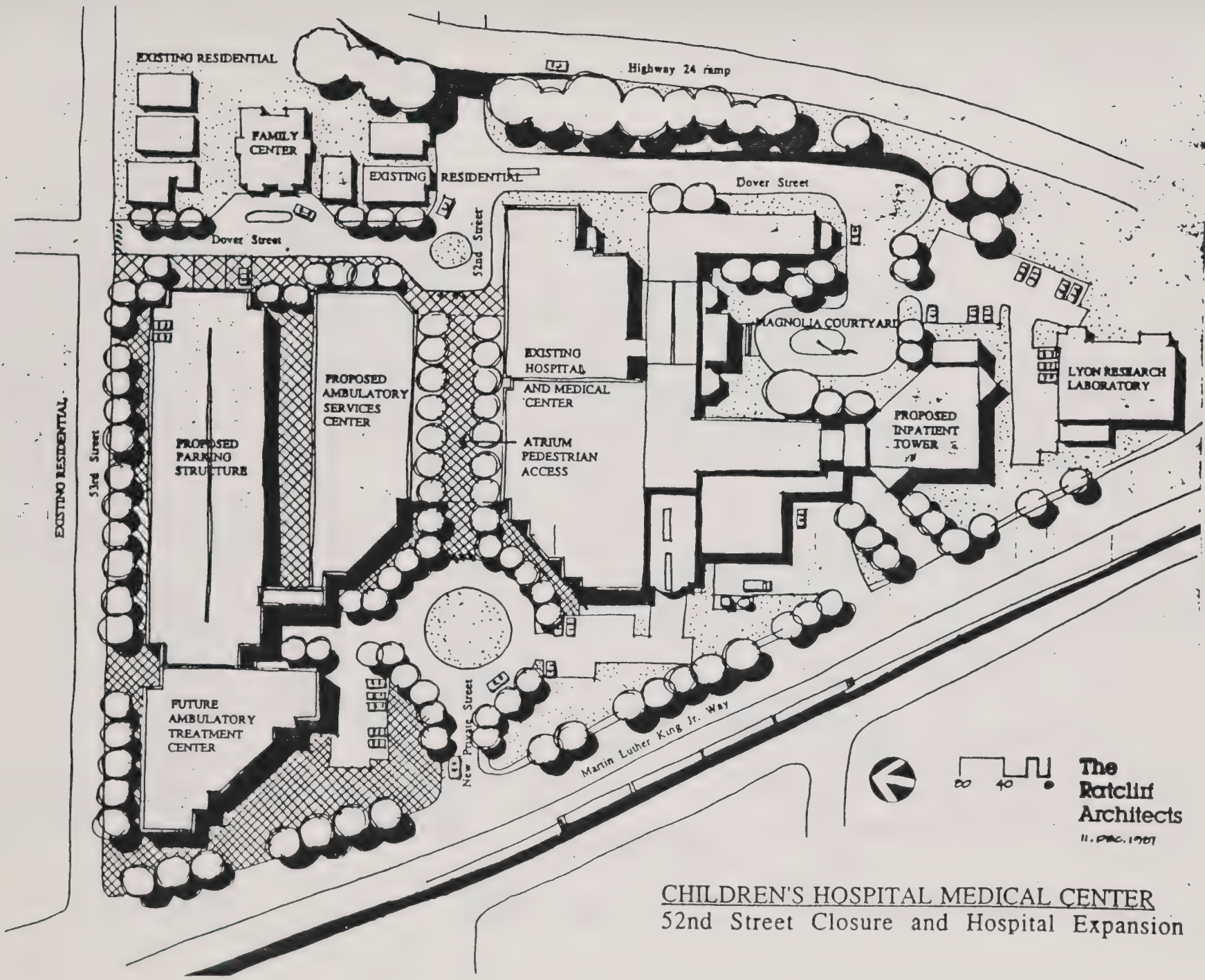
Alternatives projects considered to the street vacation included depressing the alignment of 52nd Street at Children's Hospital Medical Center and providing an underground connection to the north campus area below 52nd Street. Each of these alternatives was rejected due to the location of underground utilities.

Alternatives sites studied included relocation of the hospital out of the community to a suburban site.

Children's Hospital Medical Center
Clifton Louie, Vice President Support Services
747 52nd Street, Oakland, California 94609
415.428.3371
18 December 1987

Attachment C.

1. Construction of the proposed project will involve site grading and excavation to a limited extent. It is estimated that no more than 3,800 cubic yards of material would need to be removed from the site.
13. The project will displace 10 residential units.
14. The North Oakland district Community Council has indicated its opposition to the vacation of 52nd Street, and offered their preference for a connecting tunnel or sky-bridge.
18. The construction of the Ambulatory Services Center will require the installation of mechanical equipment to meet the HVAC needs of the building.
22. The project is related to the continued operation of the Hospital and the phased replacement of the physical plant over time.



The
Ratcliff
Architects
11. DEC. 1971

CHILDREN'S HOSPITAL MEDICAL CENTER
52nd Street Closure and Hospital Expansion

Designates Properties subject to acquisition

EXISTING RESIDENTIAL

53rd Street

EXISTING RESIDENTIAL

FAMILY
CENTER

RESIDENTIAL

Highway 24 ramp

Dover Street

52nd Street

Dover Street

PROPOSED
AMBULATORY
SERVICES
CENTER

PROPOSED
PARKING
STRUCTURE

EXISTING
HOSPITAL
AND MEDICAL
CENTER

ATRIUM
PEDESTRIAN
ACCESS

MAGNOLIA COURTYARD

PROPOSED
INPATIENT
TOWER

LYON RESEARCH
LABORATORY

FUTURE
AMBULATORY
TREATMENT
CENTER

New Private Street

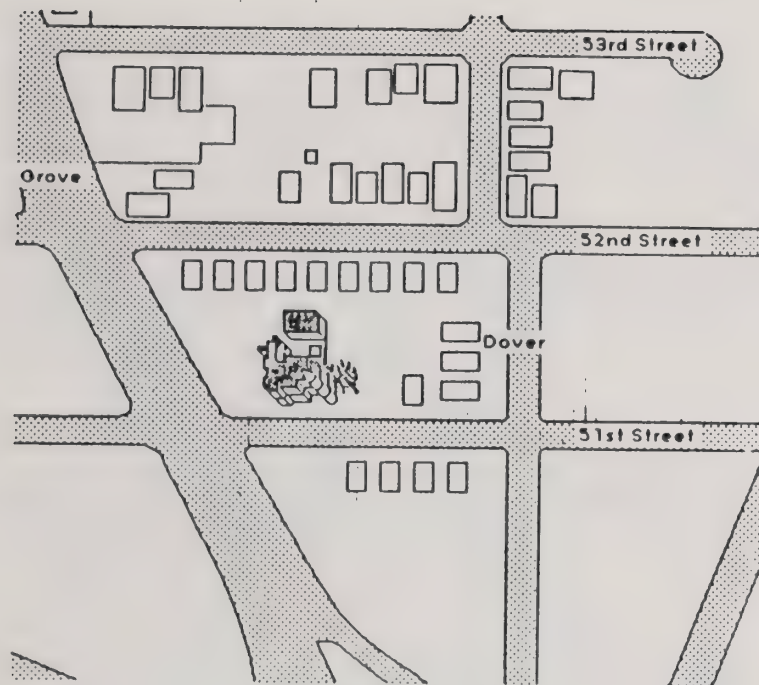
Martin Luther King Jr. Way



0 40 80

The
Ratcliff
Architects
11. DEC. 1987

CHILDREN'S HOSPITAL MEDICAL CENTER
52nd Street Closure and Hospital Expansion



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. The newly formed Baby Hospital Association purchased the McElrath Mansion for \$12,500 in 1912.
2. Bertha Wright opened the first clinic in the stable some fifteen months before the Hospital opened.
3. On Sept. 16, 1914, The Baby Hospital was dedicated with three wards and a total of thirty beds plus five private rooms.

Conclusions:

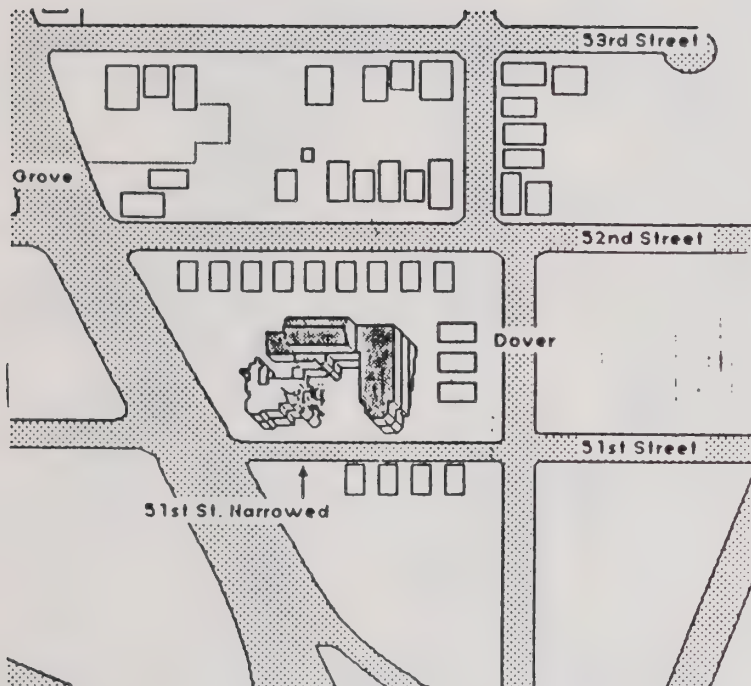
1. The large Magnolia situated in the existing courtyard surrounded by the A, B and C wings of the Hospital is the only remnant of the original McElrath Estate still remaining.
2. Every attempt should be made to preserve this Magnolia as a symbol of the Hospital's humble, if not ambitious conception.

Potentials:

1. A landscaping plan for the area in and around the magnolia could be designed and implemented in order to insure extended longevity of this delightful "artifact" from the Hospital's inception.
2. Additional magnolia plantings might be considered as part of a 75th or 100th anniversary celebration for the Hospital.

The Beginning :
Pre-1928

HISTORIC BACKGROUND 2-1



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. By 1922, the McElrath Mansion was no longer sufficient for the Hospital's needs, and by 1923, the building had been condemned by the City of Oakland as being unsafe for Hospital use.
2. Additional property was purchased along Grove Street. On October 8, 1926, ground was broken for a new hospital with a capacity of seventy seven patients.
3. The new Baby Hospital was dedicated on March 17, 1928. Architectural style was Northern Italian Renaissance similar in appearance to the first recognized Renaissance building in the world - Brunelleschi's Foundling Hospital! Copies of the original Della Robbia bambino sculptures from the Founding Hospital were imported from Italy and hung above the Main Entry door.
4. Apparently, as part of the new Hospital construction 51st Street was narrowed down as a dedicated Entry drive for the Hospital.

Conclusions:

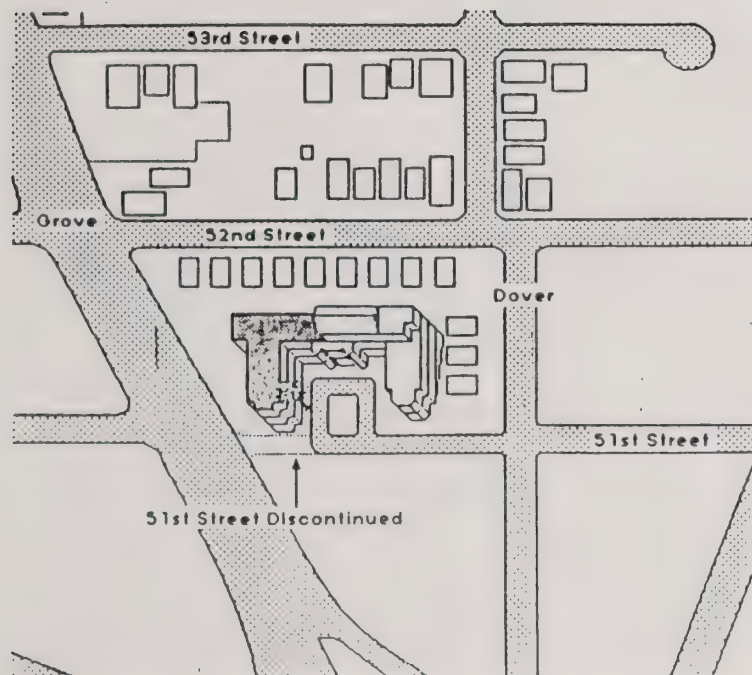
1. This 1928 Renaissance-style building remains today as a timeless tribute to both the Oakland Baby Hospital as well as the oldest known Baby Hospital in the world - the Foundling Hospital in Florence, Italy!
2. These eternal roots are embodied both by the style of the Architecture and the Della Robbia bambino as well as the sense of tranquility inherent in the arcades, bay-windowed solaria, and the Renaissance-planned Entry Court.

Potentials:

1. This timeless connection to the Renaissance and the Founding Hospital could become a strong image metaphor for the future planning and design projects at the Hospital. The character of Renaissance architecture and planning can be easily interpreted into contemporary architectural language and materials.

The Renaissance
Plan : 1928

HISTORIC BACKGROUND 2-2



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. In 1930, the name of the Baby Hospital was changed to Children's Hospital of the East Bay.
2. Sometime in the 1930's, the Clinic moved out of the McElrath Mansion and into the main floor of the new east wing. Apparently, at that time, the Mansion served as a Nurses' dormitory.
3. In the early 1940's, the Hospital's mortgage was paid off.
4. In May of 1945, the Board of Directors announced their decision to build a new west wing.
5. Construction began on Sept. 15, 1946 and the new wing was dedicated on Oct. 17, 1948. The addition of its sixty five new beds brought the Hospital's total bed capacity to one hundred forty two.

Conclusions:

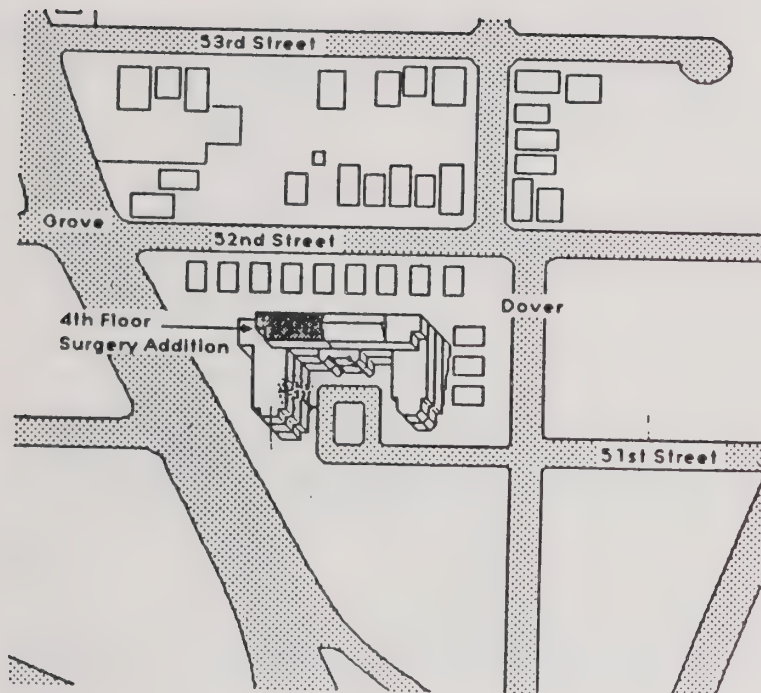
1. The Architectural style of the new west wing was very similar to the earlier Italian Renaissance character of the east wing. In fact, the west wing completed the implied Renaissance plan of the Magnolia entry Courtyard by providing a strong visual symmetry to that court.
2. This newly formed symmetrical courtyard also injected the proposed "tranquility" of the Renaissance planning.

Potentials:

1. Any future growth of the Hospital should emphasize this tranquil courtyard as a centerpiece of the Hospital plan.
2. Future allusions to this neo-renaissance architecture should be encouraged as the Della Robbia "Bambino" is still the symbol for the Hospital and serves as a timeless bridge to the past.
3. The solaria are strong visual elements that can be appreciated for their beauty both inside and out. This Bay Window-like solarium could be alluded to in future projects. If the structures they are attached to are demolished, perhaps their decorative terra cotta tile columns, friezes of the solarium can be salvaged and relocated as part of resulting new replacement projects.

The Magnolia
Court : 1948

HISTORIC BACKGROUND 2-3



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. In 1958 a Fourth Floor Surgery Addition was built on top of the existing "B" Wing portion of the 1948 West Wing.
2. The new Surgery Addition added 2 new Operating Rooms, one of which was considerably larger for special procedures.

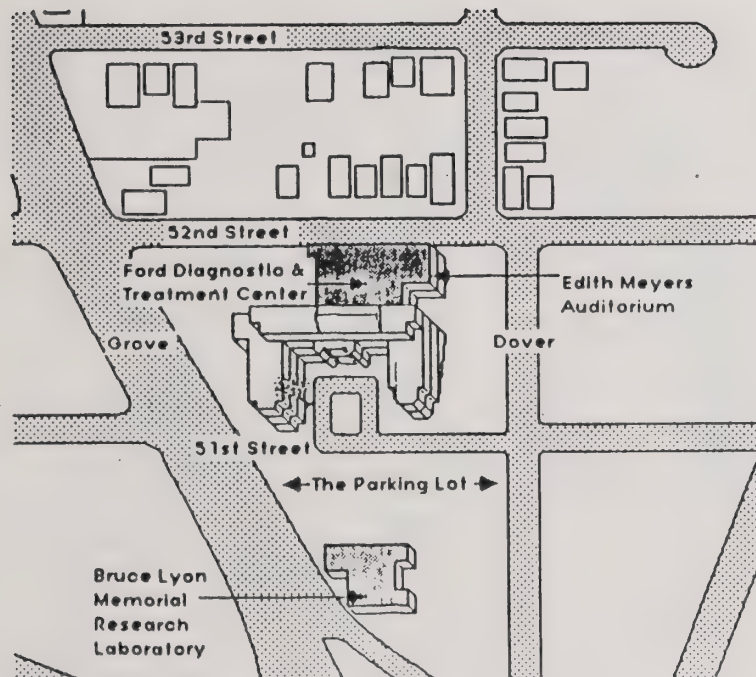
Conclusions:

1. The architectural style was nondescript, but was intended to blend in with the 1948 West Wing below.

Potentials:

1. Any future remodeling of this area should take advantage of the inward looking views of this addition towards the Magnolia Courtyard below.

**The Surgery
Addition : 1958**



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. In the 1950's, the Board of Directors embarked on a \$750,000 "Operation Facelift". The Hospital was concealed behind houses, garages, trees and billboards; and there was no parking except on the streets. In 1957, the Hospital purchased eleven houses and lots facing the entrance and created a new parking lot.
2. On Sept. 10, 1959, the Bruce Lyon Memorial Research Laboratory was dedicated at the south end of this new parking lot.
3. On May 25, 1962, the Edith Meyers, M.D., Auditorium was dedicated on Sept. 28, 1962. The William H. and Helen C. Ford Diagnostic and Treatment Center was also dedicated.

Conclusions:

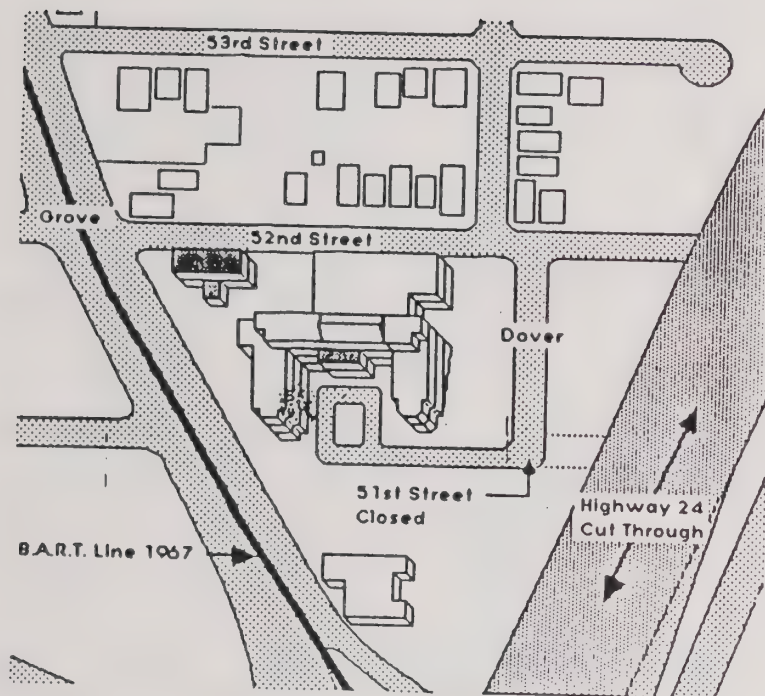
1. The Hospital entered the emerging world of Medical Technology upon the completion of the Ford Diagnostic and Treatment Center and the Bruce Lyon Memorial Research Laboratory.
2. The new architectural language for the Ford D & T building marked a distinct departure from the Renaissance flavor of the original Baby Hospital.

Potentials:

1. The significance of this departure from the Renaissance qualities of the original Hospital may have been an appropriate visual expression of the shift in technology, etc. In fact, some thought should be given to not only the overall image that the Hospital should or wants to project, but also the individual image of the different "parts" within the campus (e.g., Inpatient versus Outpatient services should they have separate images or identities?).
2. The quality of the original Magnolia Courtyard and the neo-Renaissance building seems to be of a more enduring nature than subsequent additions. Perhaps new construction and remodeling should try to reinforce that enduring quality.

The Modern Era :
1962

HISTORIC BACKGROUND 2-5



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. In 1963, the front Hospital entrance and Lobby were remodeled in a similar style to the 1962 Ford Diagnostic and Treatment Center.
2. A Nurse's dormitory was built on the corner of 52nd and Grove Streets in 1963.
3. In 1964, the Hospital changed its name to the Children's Hospital Medical Center of Northern California.
4. Hwy. 24 construction began in the early 1960's and was finished in approximately 1966, cutting off 51st Street in the process.
5. The elevated BART line on Grove Street was completed in 1967.

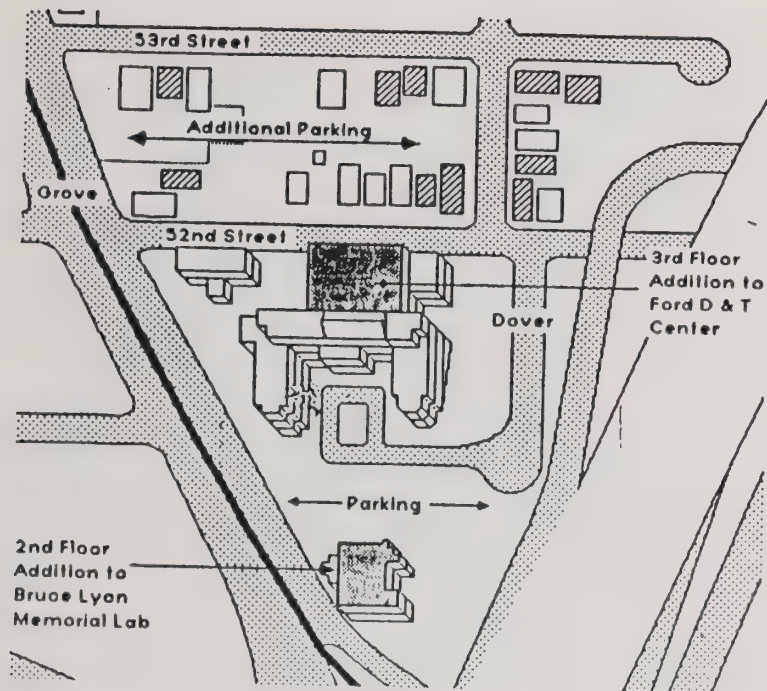
Conclusions:

1. The construction of Hwy. 24 completely changed the vehicular access pattern to the Hospital. No longer was 51st Street continuous; it had been diverted into 52nd Street between Telegraph and Shattuck, thus making 52nd Street an arterial access road.
2. At this point, the Hospital's growth options had become severely limited. The construction of the BART line along with Hwy. 24 placed the Hospital in a wedge-shaped site bounded by more or less immovable objects on the East and the West.
3. With the completion of Operation Facelift, the modern image of the Ford D & T building had been "extruded" out into the Renaissance magnolia entry court. This marked the beginning of the subsequent onslaught of "hodge podge" architectural styles to come.

Potentials:

1. The Hospital should take an aggressive stance toward its constricted site and plan wisely for the future. Any service or support that can be located off campus should be, and the limited campus should be planned wisely to allow for maximum growth flexibility.
2. The area across 52nd Street could be consolidated with the rest of the Hospital site if 52nd Street could be closed off and diverted.

Operation Face
Lift : 1964



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. In the early 1970's, the Board of Director's voted to move inpatient facilities at Children's to a location near other hospitals on "Pill Hill", leaving outpatient and research services at 51st and Grove streets. However, by 1973, this idea was reversed and it was decided to begin a program of improving the physical plant on its present site.
2. By May 22, 1975, a third floor had been added to the Ford Diagnostic and Treatment Center at a cost of \$1.9 million in order to house the expanding Neonatal Intensive Care Unit.
3. By this time, a second story had been added to the Bruce Lyon Memorial Research Laboratory to provide room for that burgeoning program, as well.
4. Many houses were acquired in the block across 52nd Street from the Hospital. Some were for Hospital departments. Others were removed or torn down to provide additional parking.

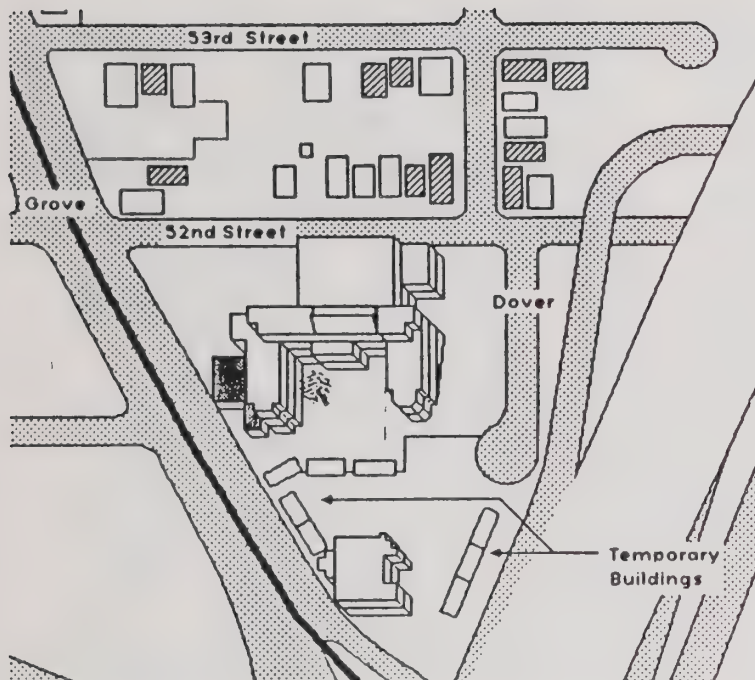
Conclusions:

1. The Hospital had begun to take an aggressive view of the block across 52nd Street as potential expansion space. Every attempt should be made to continue this trend in order to provide flexible growth options within this tight urban site.
2. The Hospital continued to turn its back on the historic Magnolia Courtyard entry and developed itself in the more modern style of the 60's and 70's.

Potentials:

1. The Hospital should continue to take an aggressive and participatory role within the surrounding community and neighborhood in order to insure growth, flexibility and positive neighborhood impact. The community needs and Hospital needs, if brought together, could result in an improved environment for everyone involved.

The "Turning
Point" : 1975



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. The Central Plant was built in preparation for the new Nursing Tower project. It was also envisioned as a permanent Central Plant concept for the next 30 - 40 years of expansion projects.
2. The Central Plant was built with a second floor expansion, not only built-in, but also pre-approved by the Office of the State Architect.
3. The Temporary Buildings were erected in order to relocate some functions in preparation for the proposed tower project.

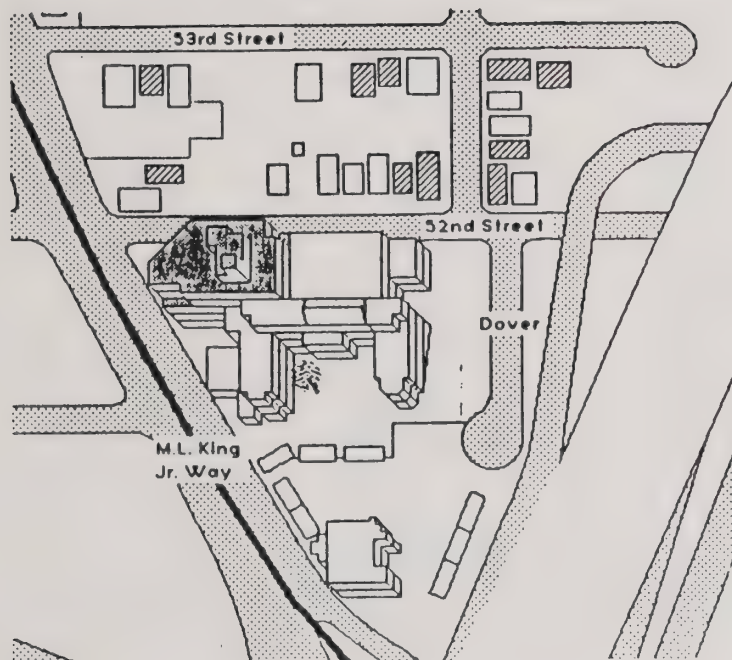
Conclusions:

1. The second floor expansion was originally planned for a new Kitchen with the Dining areas being planned for the remodeled second floor of the C Wing (1948 West Wing). Since that time, the Pediatrics Rehab. Therapy program has been moved into that remodeled area and in effect, prohibits that area being used for future Dining.

Potentials:

1. The second floor expansion is still an appropriate location for a new Kitchen, especially in relationship to improving service access. The Dining Room is presently being designed as a new building on columns adjacent to the Second Floor Kitchen expansion. This would give the Dining Room a much more public location and image.
2. The Hospital should consider a separate and remote central warehouse for its Materials Management Program. This would greatly reduce the numbers of large trucks entering the Hospitals service yard and would allow for much needed internal expansion space at the same time.

The Central
Plant : 1979



CHILDREN'S HOSPITAL MEDICAL CENTER
Campus Site Diagram

Analysis:

1. The new Nursing Tower provided much needed acute care beds and support services and effectively positioned the Hospital for competing within today's aggressive marketplace.
2. The new Nursing Tower also completed the "Public" orientation to 52nd Street while providing a new "1980's" architectural image. The public entry had moved from the original Magnolia entry with its quiet serene court to the more Urban corner of 52nd and Grove Streets.
3. Grove Street changed its name to Martin Luther King Jr. Way in 1985.

Conclusions:

1. The new entry and architectural image gave the Hospital a more urban quality and improved visual and physical access from a public point of view.
2. However, the subsequent drastic growth in and out at both 52nd and M.L. King Jr. Way has also created another urban-type image of visual clutter and confusion that should be addressed as soon as possible.

Potentials:

1. The placement of both Inpatient and Outpatient entrances at the corner of 52nd and M.L. King Jr. Way enhances this visual clutter and confusion. This could be resolved by developing an Ambulatory Services campus on the block across 52nd Street thereby creating a clear separation of Outpatient entrances away from the Acute Inpatient entry.
2. Some thought should be given to future additions to the existing tower and how these might impact it visually. It may be worth considering a new paint job that could help to break the scale of this rather large and imposing facade.

The New
Image :1982

HISTORIC BACKGROUND 2-9

File No. ER 87-75City of Oakland
Oakland, CaliforniaRef. No. R87-562INITIAL STUDY
California Environmental Quality Act

I. DESCRIPTION OF THE PROJECT

SEE ATTACHED

II. DESCRIPTION OF THE ENVIRONMENTAL SETTING

SEE ATTACHEDIII. ENVIRONMENTAL EFFECTS

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Source or Explanation</u>
<u>Geophysical.</u> Will the proposal result in:				
1. Unstable earth conditions, including erosion or slides, or changes in geologic substructures either on or off the site?				
2. Major changes in topography or ground surface relief features?			X	
3. Construction on loose fill or other unstable land which might be subject to slides or liquefaction during an earthquake?		X		
4. Construction within one quarter mile of an earthquake fault?			X	
5. Substantial depletion of a nonrenewable natural resource or inhibition of its extraction?			X	
<u>Air and Water.</u> Will the project result in:				
6. Substantial air emissions, deterioration of ambient air quality or the creation of objectionable odors?		X		
7. Substantial degradation of water quality?			X	
8. Changed drainage patterns or increased rates or quantities of surface water runoff?	X			
9. Interception of an aquifer by cuts or excavations?		X		
<u>Biotic.</u> Will the project:				
10. Reduce the quantity of fish and wildlife in the project vicinity, interfere with migratory or other natural movement patterns, degrade existing habitats or require extensive vegetation removal?			X	
11. Reduce the numbers of any rare or endangered species of plants or animals?			X	
<u>Land Use and Socio-Economic Factors.</u> Will the project:				
12. Conflict with approved plans for the area or the Oakland Comprehensive Plan?	X			
13. Carry the risk of an explosion or the release of hazardous substances, including oil, pesticides, chemicals or radiation?			X	
14. Require relocation of residents and/or businesses?	X			
15. Cause a substantial alteration in neighborhood land use, density or character?	X			
16. Generate substantially increased vehicular movement or burden existing streets or parking facilities?	X			
17. Elicit substantial public controversy or opposition?	X			
18. Have a substantial impact on existing transportation systems or circulation patterns?	X			
19. Result in a substantial increase of the ambient noise levels for adjoining areas?		X		
20. Impose a burden on public services or facilities including fire, solid waste disposal, police, schools or parks?		X		
21. Impose a burden on existing utilities including electricity, gas, water, and sewers?		X		
22. Destroy, deface or alter a structure, object, natural feature or site of historic, architectural, archeological or aesthetic significance?			X	
23. Involve an increase of 100 or more feet in the height of any structure over any previously existing adjacent structure?			X	

<u>Energy:</u> Will the project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Source or Explanation</u>
24. Use or encourage use of substantial quantities of fuel or energy?	_____	_____X_____	_____	_____

IV. MANDATORY FINDINGS OR SIGNIFICANCE (EIR required if answer to any of the following questions is "yes" or "maybe".)

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	_____	_____	_____X_____
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	_____	_____X_____	_____
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	_____X_____	_____	_____
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	_____	_____X_____	_____

If any "yes" or "maybe" answers are marked, describe the specific nature of the environmental effects involved and their relationship to the project. (Use an attached sheet if necessary.)

V. DETERMINATION:

On the basis of this initial evaluation:

- ☐ I find the proposed project WILL NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.
- ☒ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Name Willie Yee, Jr.

Date February 9, 1988

Title Associate Planner

[Signature]

I. Project Description - The proposed project consists of the following components:

A. General Plan Amendments - The following amendments to the City's General Plan would be required for the project to proceed as proposed by Children's Hospital Medical Center.

1. Extending on the City's Illustrative Future Land Use Map the Institutional or Governmental use designation of the present Children's Hospital Medical Center approximately one block north. This area is presently designated Low-Medium-Density Residential.
2. Removing from the Circulation Element's 1985 Traffic Ways map the designation of 52nd Street, between Martin Luther King, Jr. Way and the Grove Shafter Freeway, as an arterial street.

B. Rezoning - Rezoning of the area generally bounded by Martin Luther King, Jr. Way, 52nd and 53rd Streets, and the Grove Shafter Freeway from the R-50 and R-40 residential zones to the S-1 Medical Center Zone.

C. Street vacation - Children's Hospital Medical Center would like to vacate 52nd Street from Martin Luther King, Jr. Way east to Shattuck Avenue, and Dover Street from 52nd to 53rd Street.

D. New Hospital Facilities - Children's Hospital Medical Center proposes the following new facilities:

1. A 260,000 square foot parking structure containing 800 parking spaces with some ground floor retail-type uses. Vehicular access points to the garage are unknown at this time.
2. A 120,000 square foot Ambulatory Services Center. The center would be oriented to those services that can be provided on an outpatient basis.
3. Conversion of 52nd Street to a pedestrian mall.

II. Environmental Setting: - Site contains approximately 177,000 square feet. Site is almost flat. Existing development on the site bounded by Martin Luther King, Jr. Way, 52nd and 53rd Streets, and the Grove Shafter freeway consists of residential structures and surface parking lots. The existing Children's Hospital Medical Center is to the south across 52nd Street. One and two story residential structures are to the north across 53rd Street. The elevated BART line is located to the west in the center of Martin Luther King, Jr. Way; mixed residential and non-residential uses are further to the west.

Items marked "yes"

8. The project will result in the replacement of certain open, undeveloped, areas with buildings and paved surfaces. This will increase the rate of surface runoff and decrease ground water percolation quantities.
12. The proposed project conflicts with the Oakland Comprehensive Plan (see I above), and, therefore, a General Plan amendment is required.
14. The project will remove 10 residential units. It is unknown at this time how many persons will be displaced.

15. The proposed parking garage and Ambulatory Services Center will constitute a significant change from the existing residential scale development of this block.
- 16 and
18. The availability of 800 new on-site parking spaces may encourage more persons to drive to the facility rather than using public transit. The closure of 52nd Street will drastically alter the existing Circulation System of the area. A thorough traffic study should be prepared by an independent traffic consultant.
17. The project has already generated public opposition.

Items marked "maybe"

- 1 and 3.
It is unknown at this time the site's subsurface conditions.
6. Increased traffic may reduce air quality on this area.
9. See 1 and 3 above.
19. Increased traffic may increase the ambient noise level in the area.
20. The closure of 52nd and Dover Streets may adversely affect the provision of emergency services to the surrounding neighborhood.
21. It is unknown if any improvements will be required to the existing storm and sanitary sewer lines.

B. NOTICE OF PREPARATION AND RESPONSES

CITY OF OAKLAND



CITY HALL • ONE CITY HALL PLAZA • OAKLAND, CALIFORNIA 94612

Planning Department

TTY 839-6451

May 19, 1989

JUL 24 1989

NOTICE OF PREPARATION (Revised)

Children's Hospital Medical Center is proposing a 260,000 square foot parking structure, containing 800 parking spaces, and a 120,000 square foot ambulatory services center, and a 22,000 square foot expansion of a structure that serves as temporary housing for families of patients. A surface parking lot will serve the latter structure. The project site consists of the block bounded by 52nd Street, 53rd Street, Martin Luther King Jr. Way and Highway 24. The project will require a General Plan Amendment, rezoning of the project site to S-1, and street vacations (52nd Street and Dover Street). The project will also require the acquisition and removal of nine (9) residential units. The City of Oakland, as lead Agency, will prepare an Environmental Impact Report (EIR) for the project.

The City Planning Department has determined that a focused EIR should address the following issues: (1) traffic, circulation, and parking; (2) visual impacts; (3) noise; (4) air quality; (5) land use and relationship to City policies; (6) geology and hydrology; (7) energy; and public services and facilities.

If you would like to provide input regarding the scope and content of the EIR, please do so in writing as soon as possible, but not later than 30 days after receipt of this notice. Please refer to Case ER87-75 and send your response to Willie Yee, Jr., Associate Planner, City Planning Department, One City Hall Plaza, Oakland, California 94612 (415 - 273-3911). Please also provide the name of a contact person in your agency, organization or group. Thank you.

Sincerely,

ALVIN D. JAMES
Director of City Planning

ADJ:WY:cjr
ER 87-75 (R87-562)
F-123 1ER8775B.WY

NOTICE OF COMPLETION AND ENVIRONMENTAL DOCUMENT TRANSMITTAL FORM

SCR #

1. Project Title: Children's Hospital Medical Center Expansion
 2. Lead Agency: City of Oakland 3. Contact Person: Willie Yee, Jr.
 3a. Street Address: One City Hall Plaza 3b. City: Oakland
 3c. County: Alameda 3d. Zip: 94612 3e. Phone: (415) 273-3911
 PROJECT LOCATION 4. County: Alameda 4a. City/Community: Oakland

4b. Assessor's Parcel No. _____ 4c. Section _____ 4d. Top _____ 4e. Range _____

5a. Cross Streets: 52nd, 53rd, Martin Luther King Jr. Way, Highway 24 5b. For Rural, Nearest Community _____

6. Within 2 miles: a. State Hwy # 980 b. Air-ports _____ c. Rail-ways _____ d. Water-ways _____

7. DOCUMENT TYPE 8. LOCAL ACTION TYPE 9. DEVELOPMENT TYPE

CEQA 01. General Plan Update 01. Residential Units _____ Acres _____

01. X NOP (Revised) 06. NOE 02. New Element 02. Office: Sq. Ft. _____

02. Early Cons 07. NOC 03. X General Plan Amendment Acres _____ Employees _____

03. Neg Dec 08. NOD 04. Master Plan 03. Shopping/Commercial: Sq. Ft. _____

04. Draft EIR 05. Annexation Acres _____ Employees _____

05. Supplement/Subsequent EIR (Prior SCR No.: _____) 06. Specific Plan 04. Industrial: Sq. Ft. _____

07. Community Plan Acres _____ Employees _____

08. Redevelopment 05. Water Facilities: MGD _____

09. X Rezone 06. Transportation: Type _____

10. Land Division (Subdivision, Parcel Map, Tract Map, etc.) 07. Mining Mineral _____

11. Use Permit 08. Power: Type _____ Watts _____

12. Waste Mgmt Plan 09. Waste Treatment: Type _____

13. Cancel Ag Preserve 10. OCS Related _____

14. X Other Street Vacation 11. X Other: Parking structure 800 spaces;

120,000 square foot outpatient facility

22,000 square foot expansion of family center.

10. TOTAL ACRES: _____ 11. TOTAL JOBS CREATED _____

12. PROJECT ISSUES DISCUSSED IN DOCUMENT 15. Septic Systems 23. X Water Quality

01. X Aesthetic/Visual 08. X Flooding/Drainage 16. X Sewer Capacity 24. Water Supply

02. Agricultural Land 09. X Geologic/Seismic 17. Social 25. Wetland/Riparian

03. X Air Quality 10. Jobs/Housing Balance 18. Soil Erosion 26. Wildlife

04. Archaeological/Historical 11. Minerals 19. Solid Waste 27. Growth Inducing

05. Coastal Zone 12. X Noise 20. Toxic/Hazardous 28. Incompatible Landuse

06. Economic 13. X Public Services 21. X Traffic/Circulation 29. X Cumulative Effects

07. X Fire Hazard 14. Schools 22. Vegetation 30. Other _____

13. FUNDING (approx) Federal \$ _____ State \$ _____ Total \$ _____

14. PRESENT LAND USE AND ZONING Residential and Parking Lots

15. PROJECT DESCRIPTION: Parking structure with 800 spaces; 120,000 square foot ambulatory service center; closure of 52nd and Dover Streets; removal of 10 residential units; expansion (22,000 square feet) of family center and related surface parking lot.

16. SIGNATURE OF LEAD AGENCY REPRESENTATIVE Willie Yee, Jr. DATE May 23, 1989

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCR number already exists for a project, e.g., from a Notice of Preparation or previous draft document, please fill it in.

OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814

DATE: May 26, 1989

TO: Reviewing Agencies

RE: The City of Oakland's NOP for
Children's Hospital Medical Center Expansion
SCH# 88022320

Attached for your comment is the City of Oakland's Notice of Preparation of a draft Environmental Impact Report (EIR) for Children's Hospital Medical Center Expansion.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

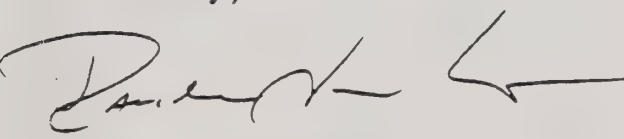
Please direct your comments to:

Willie Yee, Jr.
City of Oakland
#1 City Hall Plaza
Oakland, CA 94612

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Loreen McMahon or at 916/445-0613. Marilyn Nishikawa

Sincerely,



David C. Nunenkamp
Chief
Office of Permit Assistance

Attachments

CC: Willie Yee, Jr.

88022320

'S': Sent by Lead 'X': Sent by SCII

☒ Bob Fletcher
Air Resources Board
1102 Q Street
Sacramento, CA 95814
916/322-8267

☐ Karen Cagle
Dept. of Boating & Waterways
1629 S Street
Sacramento, CA 95814
916/445-6281

☐ Gary L. Holloway
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105
415/343-8355

☐ Terry Maderon
California Energy Commission
1516 Ninth Street, Rm. 200
Sacramento, CA 95814
916/324-3227

☐ Sandy Hensard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-1833

☐ George Smith
Caltrans - Planning
P.O. Box 942874
Sacramento, CA 94274-0001
916/445-5570

☒ Dennis O'Bryant
Dept. of Conservation
1416 Ninth Street, Room 1326-2
Sacramento, CA 95814
916/322-5873

☐ Div. of Mines and Geology

☐ Div. of Oil and Gas

☐ Land Resources Protect. Unit

☐ Vasehek Cervinka
Dept. of Food and Agriculture
1220 N Street, Room 104
Sacramento, CA 95814
916/322-5227

☐ Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
Sacramento, CA 95814
916/322-0128

☐ Robert Steppy
Dept. of General Services
400 P Street, Suite 3460
Sacramento, CA 95814
916/324-0214

☒ Arlene Chance
Dept. of Health
714 P Street, Room 1253
Sacramento, CA 95814
916/323-6111

☒ Sgt. Jim Weddell
California Highway Patrol
Long Range Planning Section
Planning and Analysis Division
2555 First Avenue
Sacramento, CA 95818
916/445-1981

☐ William A. Johnson
Native American Heritage Comm.
915 Capitol Mall, Room 288
Sacramento, CA 95814
916/322-7791

☒ Hans Kreutzberg
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/322-9621

☐ Mike Doyle
Dept. of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001
916/324-6421

☐ George Herath
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
415/557-1375 (8-597)

☐ Anna Leena Bronson
Reclamation Board
1416 Ninth Street Room 204-8
Sacramento, CA 95814
916/322-3740

☐ Norris Milliken
S.F. Bay Conservation & Dev't. Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

☐ Jeannie Blakelee
Calif. Waste Management Board
1020 Ninth Street, Room 300
Sacramento, CA 95814
916/327-0454

☐ Ted Fukushima
State Lands Commission
1807 - 13th Street
Sacramento, CA 95814
916/322-7813

☐ Nadell Gayou
Dept. of Water Resources
1416 Ninth Street, Room 215-4
Sacramento, CA 95814
916/445-7416

☐ Reed Holderman
State Coastal Conservancy
1330 Broadway, Suite 1100
Oakland, CA 94612
415/464-1015

DHS/TSCD: _____

Department of Transportation District Contacts

☐ Brent Soule
Caltrans, District 1
1656 Union Street
Berkeley, CA 94501
707/445-6320 (8-518)

☐ Michelle Gallagher
Caltrans, District 2
1657 Riverside Drive
Redding, CA 96001
916/225-3259 (8-442)

☐ Brian J. Smith
Caltrans, District 3
703 B Street
Marysville, CA 95901
916/741-4277 (8-457)

☒ Gary Adams
Caltrans, District 4
P.O. Box 7310
San Francisco, CA 94120
415/557-8371 (8-597)

☐ Jerry Laumer
Caltrans, District 5
P.O. Box 8114
San Luis Obispo, CA 93403-8114
805/549-3161 (8-629)

☐ Nathan Smith
Caltrans, District 6
P.O. Box 12616
Fresno, CA 93778
209/488-4088 (8-422)

☐ Jeff Bingham
Caltrans, District 7
120 South Spring Street
Los Angeles, CA 90012
213/620-5335 (8-640)

☐ Richard Malacoff
Caltrans, District 8
247 West Third Street
San Bernardino, CA 92403
714/383-4357 (8-670)

☐ Andy Zellman
Caltrans, District 9
500 South Main Street
Bishop, CA 94514
619/672-0693 (8-627)

☐ Al Johnson
Caltrans, District 10
P.O. Box 2048
Stockton, CA 95201
209/948-7838 (8-423)

☐ Jim Chemire
Caltrans, District 11
P.O. Box 85406
2829 Juan Street
San Diego, CA 92138-5406
714/237-6755 (8-631)

☐ Al Fisher
Caltrans, District 12
2501 Pullman St.
Santa Ana, CA 92705
714/724-2061

Fish and Game - Regional Offices

☐ A. Naylor, Regional Manager
Department of Fish and Game
601 Locust
Redding, CA 96001
916/225-2300 (8-442)

☐ Jim Messersmith, Regional Manager
Department of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
916/355-0922 (8-438)

☒ B. Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yountville, CA 94599
707/944-2011 (8-577)

☐ G. Nokes, Regional Manager
Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 93710
209/222-3761 (8-421)

☐ Fred A. Worthley, Jr., Reg. Manager
Department of Fish and Game
330 Golden Shore, Suite 50
Long Beach, CA 90802
213/590-3113 (8-635)

☐ Roy E. Mail
Marine Resources Region
330 Golden Shore, Suite 50
Long Beach, CA 90802
213/590-5155 (8-635)

State Water Resources Control Board

☐ Allan Patton
State Water Resources Control Board
Division of Loans & Grants
P.O. Box 944212
Sacramento, CA 94244-2120
916/739-4414

☐ Ed Anton
State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95801
916/445-9552

☐ Dave Berlinger
State Water Resources Control Board
Delta Unit
P.O. Box 2000
Sacramento, CA 95810
916/322-9870

☐ Mike Falkenstein
State Water Resources Control Board
Division of Water Rights
901 P Street
Sacramento, CA 95814
916/324-5636

OTHER: _____

Regional Water Quality Control Board

☐ NORTH COAST REGION (1)
1440 Guerneville Rd.
Santa Rosa, CA 95401
707/576-2220 (8-590)

☒ SAN FRANCISCO BAY REGION (2)
1111 Jackson Street, Room 6000
Oakland, CA 94607
415/464-1255 (8-561)

☐ CENTRAL COAST REGION (3)
1102 A Laurel Lane
San Luis Obispo, CA 93401
805/549-3147 (8-629)

☐ LOS ANGELES REGION (4)
107 South Broadway, Room 4027
Los Angeles, CA 90012
213/620-4460 (8-640)

☐ CENTRAL VALLEY REGION (5)
3443 Router Road, Suite A
Sacramento, CA 95827-3098
916/361-5600

☐ Fresno Branch Office
3374 East Shields Avenue, Room 18
Fresno, CA 93726
209/445-5116 (8-421)

☐ Redding Branch Office
100 East Cypress Avenue
Redding, CA 96002
916/225-2045 (8-442)

☐ LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
P.O. Box 9428
South Lake Tahoe, CA 95731
916/544-3481

☐ Victorville Branch Office
15371 Bonanza Road
Victorville, CA 92392-2494
619/241-6583

☐ COLORADO RIVER BASIN REGION (7)
73-271 Highway 111, Suite 21
Palm Desert, CA 92260
619/346-7491

☐ SANTA ANA REGION (8)
6809 Indiana Avenue, Suite 200
Riverside, CA 92506
714/782-4130 (8-632)

☐ SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd., Suite B
San Diego, CA 92124-1331
619/265-5114 (8-636)

☒ APCD/AQMD: _____

BAY AREA AQMD
939 ELLIS STREET
SAN FRANCISCO, CA 94109
ATTN: APC OFFICER

Statewide
Let's Ping

DEPARTMENT OF TRANSPORTATION

BOX 7310

SAN FRANCISCO, CA 94120

(415) 923-4444

JUL 14 1989



June 14, 1989

ALA-024-PM-2.65

SCH# 88022320

ALA024009

Willie Yee, Jr.
City of Oakland
#1 City Hall Plaza
Oakland, CA 94612

**RE: CHILDREN'S HOSPITAL MEDICAL CENTER EXPANSION - 142,000 SQ.
FT. NOTICE OF PREPARATION**

Dear Mr. Yee:

Thank you for including the Department of Transportation (Caltrans) in the environmental review process for the above-referenced Notice of Preparation. The environmental document should address the traffic impact in terms of:

- a) Trip generation, distribution and assignment;
- b) ADT, and AM and PM peak hour volumes for the State Routes 24, 123, 580, 980 and for all significantly affected streets and highways, including freeway ramps and crossroads, and controlling intersections, for existing and future traffic.
- c) Future conditions with project traffic, and with cumulative traffic generated by all approved developments in the area. Coverage should include all traffic that would affect the facilities evaluated, and should not be limited to projects under the jurisdiction of the lead agency.
- d) Mitigations that consider highway and non-highway improvements and services. Special attention should be given to the development of alternative solutions to circulation problems which do not rely on increased highway construction. For example, include methods of Traffic Demand Management, coordination of employment and housing strategies, Public Transit Development, Traffic Reduction Strategies like Rideshare, Vanpool, Carpool, and Park and Ride.

- e) All mitigations being proposed should be fully discussed in the environmental document. Those discussions should include, but not be limited to, the following areas:

financing,
scheduling considerations,
implementation responsibilities,
monitoring.

We look forward to reviewing the draft EIR. We expect to receive a copy from the State Clearinghouse. However, to expedite the review process, you may send two (2) advance copies to the undersigned contact person for this agency at the following address:

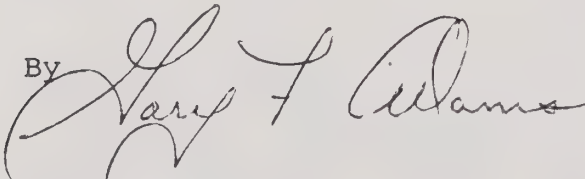
Gary F. Adams
District CEQA Coordinator
Caltrans District 4
P. O. Box 7310
San Francisco, CA 94120

Should you have any questions regarding these comments, please contact Alice Jackson of my staff at (415) 557-2483.

Sincerely yours,

BURCH C. BACHTOLD
District Director

By



GARY F. ADAMS
District CEQA Coordinator

cc: Loreen McMahon - State Clearinghouse
Susan Pultz - MTC
Sally Germain - ABAG



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

June 16, 1989

City of Oakland
City Planning Department
One City Hall Plaza
Oakland, California 94612

Attention: Willie Yee, Jr.
Associate Planner

Dear Mr. Yee:

We have received the Notice of Preparation of a Draft EIR for the Children's Hospital Medical Center Expansion. The proposed project consists of a 260,000 square foot parking garage containing 800 parking spaces, a 120,000 square foot ambulatory services center, and a 22,000 square foot structure for temporary housing of families of patients. The project site is bounded by 52nd Street, 53rd Street, Martin Luther King Jr. Way, and Highway 24.

The proposed project could generate a significant number of vehicle trips and associated air pollutant emissions. Large parking structures can present special air quality concerns due to high trip generation, higher than average idling, and enclosed spaces. Carbon monoxide (CO) concentrations in and around parking structures can reach unhealthful levels. High CO concentrations near the proposed parking structure are a particular concern because the existing hospital and the proposed ambulatory center are considered sensitive receptors - facilities with occupants who are especially sensitive to the effects of air pollutants.

We strongly recommend that the DEIR include estimates of worst-case CO concentrations for the one-hour and eight-hour averaging times. CO concentrations should be estimated at intersections most affected by project traffic and at receptor points near the existing hospital and the proposed ambulatory center. If violations of State or federal standards are indicated, the DEIR should propose specific mitigation measures and indicate who is responsible for implementing each measure.

The DEIR should also discuss ventilation of the parking structure and propose measures to assure that unhealthful CO concentrations do not build up in the structure. Finally, we recommend that the DEIR indicate the location

Mr. Willie Yee, Jr.
June 16, 1989
Page 2

of ventilation intake vents for the hospital and ambulatory center. All ventilation systems should be located away from areas that may be subject to high pollutant levels.

The BAAQMD publication AIR QUALITY AND URBAN DEVELOPMENT - GUIDELINES FOR ASSESSING IMPACTS OF PROJECTS AND PLANS provides guidance in conducting air quality analyses. If you have any questions, please contact Henry Hilken, Planner, at (415) 771-6000, extension 112.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Milton Feldstein', written in a cursive style.

Milton Feldstein
Air Pollution Control Officer

MF:HH:lh

DEPARTMENT OF CONSERVATION

DIVISION OF ADMINISTRATION
DIVISION OF MINES AND GEOLOGY
DIVISION OF OIL AND GAS
DIVISION OF RECYCLING



1416 Ninth Street
SACRAMENTO, CA 95814
TDD (916) 324-2555
ATSS 454-2555
(916) 445-8733

June 22, 1989

RECEIVED

JUN 26 1989
CITY PLANNING COMMISSION
ZONING DIVISION

Mr. Willie Yee, Jr.
City of Oakland
#1 City Hall Plaza
Oakland, CA 94612

Dear Mr. Yee:

Subject: Notice of Preparation (NOP) of a Draft Environmental
Impact Report (EIR) for the Children's Hospital Medical
Center Expansion, SCH# 88022320

Thank you for forwarding the NOP for the above project. The Department of Conservation's Division of Mines and Geology (DMG) has special expertise in evaluating geologic and seismic hazards. DMG will have two opportunities to review the geologic and seismic aspects of this project: once, for conformance with the California Environmental Quality Act (CEQA) through the State Clearinghouse and again, for conformance with Title 24 of the California Administrative Code through the Office of the State Architect. Because hospital facilities are considered essential services facilities following an earthquake, the geologic and seismic aspects of this project will need to be covered in more detail than for most developments.

DMG's Note 46, enclosed, is used as a guide by DMG staff when reviewing Draft EIRs received through the State Clearinghouse. It contains a checklist of potential environmental impacts related to geology, seismology and mineral resource conservation, which you should consider in preparing the Draft EIR. DMG's Note 48, also enclosed, is used as a guide when reviewing geologic/seismic reports for hospital and essential services buildings received through the Office of the State Architect (OSA). This more focused checklist should also be considered in preparing the Draft EIR.

The main geologic hazard of concern to this project is the potential for strong seismic shaking caused by earthquakes on nearby faults. The secondary effects of severe ground shaking, including liquefaction and differential settlement, are also a concern at this site. We recommend that detailed geotechnical/geological investigations be performed as a part of the Draft EIR preparation. These investigations should be of sufficient detail

Mr. Willie Yee, Jr.
June 22, 1989
Page Two

to adequately address all of the geologic and seismic data outlined on the DMG Notes enclosed, and should be included in the Draft EIR as a Technical Appendix.

Two DMG publications which may assist in the preparation of the Draft EIR are included as references at the end of this letter. If you have any questions regarding these comments, please contact Zoe McCrea, Division of Mines and Geology Environmental Review Officer, at (916) 322-2562.

Sincerely,



Dennis J. O'Bryant
Environmental Program Coordinator

DJO:TM:efh
Enclosures

cc: Zoe McCrea, Division of Mines and Geology
Timothy McCrink, Division of Mines and Geology

References:

California Division of Mines and Geology, 1982, Proceedings: conference on earthquake hazards in the eastern San Francisco Bay area: E. W. Hart, S. E. Hirschfeld, and S. S. Schulz, editors, CDMG Special Publication 62, 447p.

Steinbrugge, K. V., Bennett, J. H., Lagorio, H. J., Davis, J. F., Borchardt, G., and Topozada, T. R., 1987, Earthquake planning scenario for a magnitude 7.5 earthquake on the Hayward fault in the San Francisco Bay area: California Division of Mines and Geology Special Publication 78.

/



GUIDELINES FOR GEOLOGIC/SEISMIC CONSIDERATIONS IN ENVIRONMENTAL IMPACT REPORTS

The following guidelines were prepared by the Division of Mines and Geology with the cooperation of the State Water Resources Control Board to assist those who prepare and review environmental impact reports.

These guidelines will expedite the environmental review process by identifying the potential geologic problems and by providing a recognition of data needed for design analysis and mitigating measures. All statements should be documented by reference to material (including specific page and chart numbers) available to the public. Other statements should be considered as opinions and so stated.

1. CHECKLIST OF GEOLOGIC PROBLEMS FOR ENVIRONMENTAL IMPACT REPORTS

GEOLOGIC PROBLEMS		Could the project or geologic event cause environmental problems?			Is this conclusion documented in attached reports?	
PROBLEM	ACTIVITY CAUSING PROBLEM	NO	YES	ENVIRONMENTAL PROBLEMS	NO	YES
EARTHQUAKE DAMAGE	Fault Movement					
	Liquefaction					
	Landslides					
	Differential Compaction/ Seismic Settlement					
	Ground Rupture					
	Ground Shaking					
	Tsunami					
	Seiches					
	Flooding Due to Failure of Dams and Levees					
LOSS OF MINERAL RESOURCES	Loss of Access					
	Deposits Covered by Changed Land-Use Conditions					
	Zoning Restrictions					
WASTE DISPOSAL PROBLEMS	Change in Groundwater Level					
	Disposal of Excavated Material					
	Percolation of Waste Material					
SLOPE AND/OR FOUNDATION INSTABILITY	Landslides and Mudflows					
	Unstable Cut and Fill Slopes					
	Compressible and Expansive Soil					
	Trench-Wall Stability					
EROSION, SEDIMENTATION, FLOODING	Erosion of Graded Areas					
	Alteration of Runoff					
	Unprotected Drainage Ways					
	Increased Impervious Surfaces					
LAND SUBSIDENCE	Extraction of Groundwater, Gas, Oil, Geothermal Energy					
	Hydrocompaction, Peat Oxidation					
VOLCANIC HAZARDS	Lava Flow					
	Ash Fall					

(over)

II. CHECKLIST OF GEOLOGIC REPORT ELEMENTS

REPORT ELEMENTS	YES	NO
A. General Elements Present Description and map of project. Description and map of site. Description and map of pertinent off-site areas.		
B. Geologic Element (refer to checklist) Are all the geologic problems mentioned? Are all the geologic problems adequately described?		
C. Mitigating Measures Are mitigating measures necessary? Is sufficient geologic information provided for the proper design of mitigating measures? Will the failure of mitigating measures cause an irreversible environmental impact?		
D. Alternatives Are alternatives necessary to reduce or prevent the irreversible environmental impact mentioned? Is sufficient geologic information provided for the proper consideration of alternatives? Are all the possible alternatives adequately described?		
E. Implementation of the Project Is the geologic report signed by a registered geologist? Does the report provide the necessary regulations and performance criteria to implement the project?		

*Required for interpretive geologic information.

III. PUBLISHED REFERENCES (selected)

A. California Division of Mines and Geology Publications 1. Alfors, J.T., et al., 1973. Urban geology master plan for California: Bulletin 198. 2. Greenfelder, R.W., 1974. Maximum credible rock acceleration from earthquakes in California: Map Sheet 23. 3. Jennings, C.W., 1975. Fault Report 13 of California, GDM No. 1. 4. Oakeshott, G.B., 1974. San Fernando, California, earthquakes of 9 February 1971: Bulletin 198. 5. Note No. 37, Guidelines to geologic/seismic reports, 1973. 6. Note No. 43, Recommended guidelines for determining the maximum credible and the maximum probable earthquakes, 1975.	7. Note No. 44, Recommended guidelines for preparing engineering geologic reports, 1975. 8. Note No. 46, Recommended guidelines for preparing mine reclamation plans, 1976. 9. Parks, D.L., Reel, C.R., Topposada, T.R., 1978. Earthquake Epicenter Map of California, showing events from 1900 through 1974. 10. Reel, C.R., Topposada, T.R., and Parks, D.L., 1978. Earthquake catalog of California, January 1, 1800-December 31, 1974 (microfiche). B. Other Publications 1. Allen, C.R., et al., 1966. Relationship between seismicity and geologic structure in the southern California region: Bulletin of the Seismological Society of America, v. 56, no. 4.	2. Bolt, B.A. and Miller, R.D., 1971. Seismicity of northern and central California, 1965-1968: Bulletin of the Seismological Society of America, v. 61, no. 6. 3. California Department of Water Resources, 1984. Crustal strain and fault movement investigation: Bulletin No. 118-2. 4. Coffman, J.L. and von Helke, C.A., ed., 1973. Earthquake history of the United States: U.S. Department of Commerce, Publication 41-1. 5. Hileman, J.A., et al., 1973. Seismicity of the southern California region, 1 January 1932 to 31 December 1972: California Institute of Technology, Contribution 2386. Periodical updates to this are available.
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IV. PUBLIC AGENCIES WITH GEOLOGIC DATA

Source	Data Available			
	Seismicity	Geology	Ground Water	Soils
Libraries and Geology and Engineering Departments of California Universities	X	X	X	X
California Institute of Technology	X			
California Division of Mines and Geology (Sacramento, San Francisco, Los Angeles, CA)	X	X		
California Department of Water Resources (Sacramento, CA)		X		X
California Department of Transportation (District Offices)				X
County Soil & Water Conservation Districts				X
County Engineer and Departments of Building and Safety	X	X		X
County Highway Department				X
County Flood Control District				X
U.S. Geological Survey (Menlo Park, CA)		X		
U.S. Corps of Engineers (District Engineer)		X		
U.S. Bureau of Reclamation (Regional Offices)		X		
U.S. Soil Conservation Service and Forest Service				X



CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY

DMG
NOTE 48

CHECKLISTS FOR THE REVIEW OF GEOLOGIC/SEISMIC REPORTS

The following checklists, "Review of the Geologic Data" and "Review of the Seismic Data", were prepared for the purpose of determining the adequacy of geologic/seismic hospital site reports that are prepared by consulting engineering geologists, submitted to the Office of Architecture and Construction and reviewed by the Division of Mines and Geology. This review procedure is required by regulations of the California Administrative Code, Title 17, Chapter 8, Safety of Construction of Hospitals. In addition, DMG Forms 42 and 43, which are referred to in the regulations, provide guidelines on the preparation of geologic/seismic reports.

A. REVIEW OF THE GEOLOGIC DATA

Project _____ Location _____ File No. _____
Reviewed by _____ Date Reviewed _____ Review No. _____

SUPPORT DATA	Report is acceptable	Additional data needed	COMMENT
1. Surface geologic information and map (minimum scale map 1:24,000)			
2. Subsurface geologic information and map (detailed geologic cross-section)			
3. Faults mapped within or adjacent to site			
4. Magnitude and distance of all relevant faults within 100-km radius			
5. Potential for liquefaction (ground water and soil conditions)			
6. Potential for seismic settlement and differential compaction			
7. Potential for landsliding			
8. Potential for earthquake-induced flooding			
9. Potential for tsunamis			
10. Potential for seiches			
11. Bibliography			
12. Report prepared or signed by Engineering Geologist certified in California			
13. If the site is within an Alquist-Priolo Special Studies Zone, was the study conducted in accordance with the procedures established by local government?			
14. Has the City or County Seismic Safety and Safety Element of the General Plan been considered during the preparation of this report?			
15. Has the engineering geologist indicated that he visited the site and verified the support data?			

B. REVIEW OF THE SEISMIC DATA

Project _____ Location _____ File No. _____

Reviewed By _____ Date Reviewed _____ Review No. _____

SUPPORT DATA	Report is acceptable	Additional data needed	Endorsed** (Yes or No)	COMMENT
1. Location of site (latitude and longitude)				
2. Maximum credible earthquake				
3. Maximum credible rock acceleration*				
4. Maximum probable earthquake				
5. Maximum probable rock acceleration*				
6. Potential for liquefaction				
7. Potential for ground lurching and amplification				

*Required for dynamic analysis considerations on foundation and structural stability.

**Refers to ground acceleration as stated in the Opinion No. CV73/204, 7/11/74, of the Office of the Attorney General.

U.C. BERKELEY LIBRARIES



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